



# ***STIC Search Report*** **EIC 1700**

**STIC Database Tracking Number: 171746**

**TO: Greg Delcotto  
Location: REM 9A37  
Art Unit : 1751  
November 17, 2005**

**Case Serial Number: 10/085997**

**From: Kathleen Fuller  
Location: EIC 1700  
REMSSEN 4B28  
Phone: 571/272-2505  
Kathleen.Fuller@uspto.gov**

## **Search Notes**

I searched the starting materials in Casreact, a reaction database. There were 22 CA references where the dicyandiamide and the diamine were the starting materials. None of the references included formaldehyde and none seemed pertinent.

I also searched in CA using a combination of the registry numbers and names of the starting materials, limited by utility. There are some answers (marked ) which have good dates and may be useful.

If you have any questions give me a call.

Fuller

Access DB# 171046

# SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: GREG DELCOTTO Examiner #: 72268 Date: 11/16/05  
 Art Unit: 1751 Phone Number: 302-1312 Serial Number: 10/085997  
 Mail Box and Bldg/Room Location: RAMSEY 9A37 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Laundry detergents and laundry treatment compositions comprising inhibiting dye transfer

Inventors (please provide full names): FRANK PETER LANG, HELMUT BERENBOLO,  
MICHAEL WESSLING

Earliest Priority Filing Date: 9/3/01

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

\*SEE CLAIMS AND BIB JURET

SCIENTIFIC REFERENCE BR  
 Sci & Tech Inf - Cntr

NOV 16 REC'D

Pat. & T.M. Office

\*\*\*\*\*  
 STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>X. Fuller</u>	NA Sequence (#) _____	STN <u>✓</u>
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) <u>3</u>	Questel/Orbit _____
Date Searcher Picked Up: _____	Bibliographic _____	Dr.Link _____
Date Completed: <u>11/17/05</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>40</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: <u>58</u>	Other _____	Other (specify) _____

PTO-1590 (8-01) Correct



# STIC Search Results Feedback Form

**EIC17000**

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Kathleen Fuller, EIC 1700 Team Leader  
571/272-2505 REMSEN 4B28

## Voluntary Results Feedback Form

- I am an examiner in Workgroup:  Example: 1713
- Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

- Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

=> FILE CASREACT

FILE 'CASREACT' ENTERED AT 16:03:29 ON 17 NOV 2005  
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT  
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications.

FILE CONTENT:1840 - 13 Nov 2005 VOL 143 ISS 20

New CAS Information Use Policies, enter HELP USAGETERMS for details.

\*\*\*\*\*  
\*  
\* CASREACT now has more than 9.2 million reactions \*  
\*  
\*\*\*\*\*

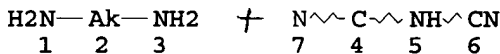
Some CASREACT records are derived from the ZIC/VINITI database (1974-1991) provided by InfoChem, INPI data prior to 1986, and Biotransformations database compiled under the direction of Professor Dr. Klaus Kieslich.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE

L26 STR

RRT



→ any product

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE

L28 22 SEA FILE=CASREACT SSS FUL L26 ( 79 REACTIONS)

L30 0 SEA FILE=CASREACT ABB=ON L28 AND 50-00-0/NPRO

L31 0 SEA FILE=CASREACT ABB=ON L28 AND 50-00-0/RRT

L32 22 SEA FILE=CASREACT ABB=ON L28 OR L30 OR L31

22 CA references from the reaction

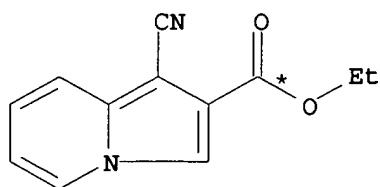
> none with formaldehyde

=> D L32 FHIT BIB ABS

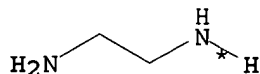
L32 ANSWER 1 OF 22 CASREACT COPYRIGHT 2005 ACS on STN

RX(24) OF 36 COMPOSED OF RX(6), RX(7)

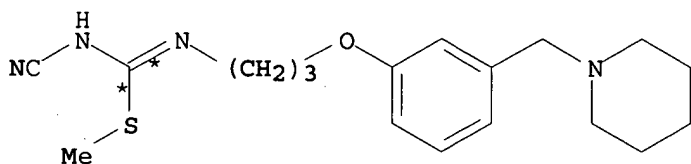
RX(24) M + R + T ==> U



M



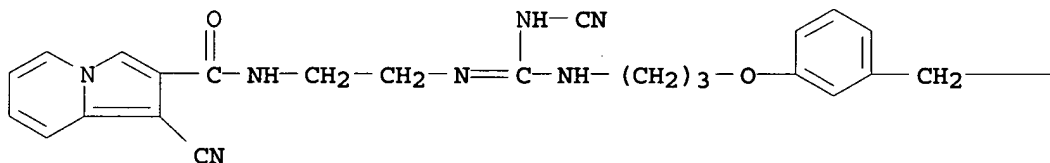
R



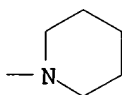
T

2  
STEPS  
→

PAGE 1-A



PAGE 1-B



U

YIELD 8%

RX(6) RCT M 3243-06-9, R 107-15-3  
PRO S 825639-30-3  
CON 5 hours, reflux

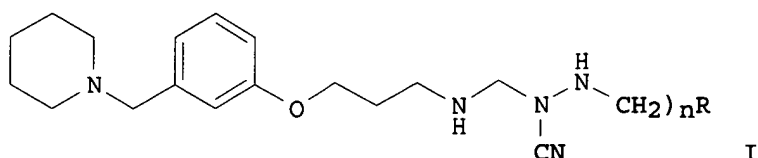
RX(7) RCT S 825639-30-3, T 73279-12-6  
PRO U 825639-19-8  
SOL 110-86-1 Pyridine  
CON 3 hours, reflux

AN 142:134529 CASREACT

TI Fluorescent ligands for the histamine H2 receptor: synthesis and preliminary characterization

AU Malan, Sarel F.; van Marle, Andre; Menge, Wiro M.; Zuliana, Valentina;  
Hoffman, Marcel; Timmerman, Henk; Leurs, Rob

CS Pharmaceutical Chemistry, North-West University, Potchefstroom, 2520, S. Afr.  
 SO Bioorganic & Medicinal Chemistry (2004), 12(24), 6495-6503  
 CODEN: BMECEP; ISSN: 0968-0896  
 PB Elsevier Ltd.  
 DT Journal  
 LA English  
 GI



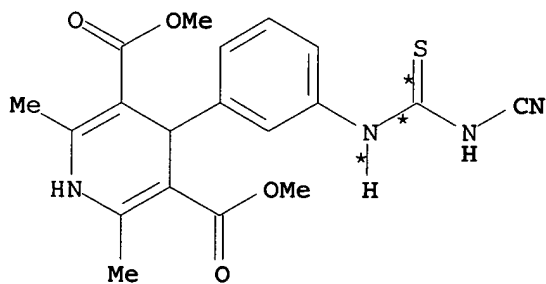
AB 3-[3-(Piperidinomethyl)phenoxy]alkyl, N-cyano-N'-[ω-[3-(1-piperidinylmethyl)phenoxy]alkyl]guanidine and 2-(5-methyl-4-imidazolyl)methyl thioethyl derivs. containing fluorescent functionalities were synthesized and their histamine H2 receptor affinity was evaluated using the H2 antagonist [125I]-aminopotentidine. The compds. exhibited weak to potent H2 receptor affinity with pKi values ranging from <4 to 8.85. The highest H2 receptor affinity was observed for guanidines I [n = 2, R = NHCOC6H4NHMe-2, 1-cyano-2-indolizinecarboxamido; n = 3, R = 1-cyanoisindol-2-yl].

RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

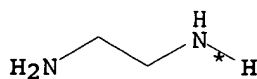
=> D L32 FHIT BIB ABS 2-22

L32 ANSWER 2 OF 22 CASREACT COPYRIGHT 2005 ACS on STN

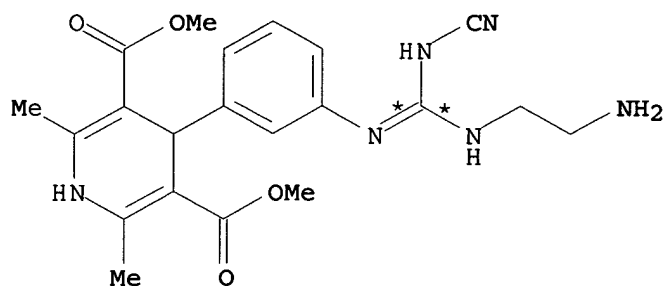
RX(1) OF 42 A + B ==> C...



● Na



(1) →



C  
YIELD 58%

RX(1) RCT A 216507-77-6, B 107-15-3  
RGT D 7487-94-7 HgCl<sub>2</sub>  
PRO C 821792-42-1  
SOL 109-99-9 THF  
CON 3 hours, room temperature

AN 142:113851 CASREACT

TI Isosteric N-arylpiperazine replacements in a series of dihydropyridine NPY<sub>1</sub> receptor antagonists

AU Luo, Guanglin; Mattson, Gail K.; Bruce, Marc A.; Wong, Henry; Murphy, Brian J.; Longhi, Daniel; Antal-Zimanyi, Ildiko; Poindexter, Graham S.

CS Department of Chemistry, Bristol-Myers Squibb Pharmaceutical Research Institute, Wallingford, CT, USA

SO Bioorganic & Medicinal Chemistry Letters (2004), 14(24), 5975-5978  
CODEN: BMCLE8; ISSN: 0960-894X

PB Elsevier B.V.

DT Journal

LA English

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

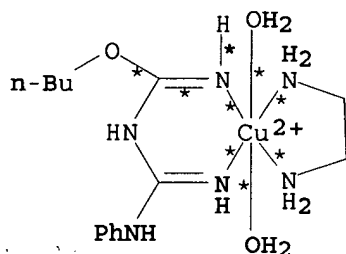
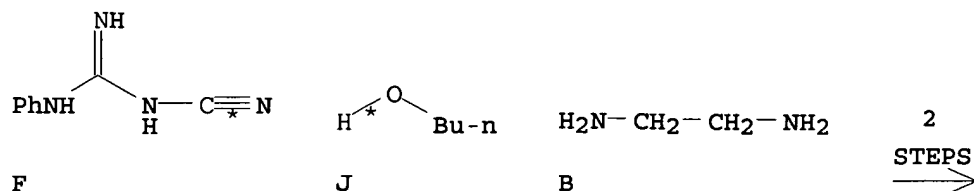
AB The synthesis of isosteres of 1,4-dihydro-2,6-dimethyl-4-[3-[[[3-(1-piperazinyl)propyl]amino]carbonyl]amino]phenyl]-3,5-pyridinedicarboxylic acid di-Me ester (I) (urea) and of 4-[3-[[[(cyanoamino)[3-(1-piperazinyl)propyl]amino]methylene]amino]phenyl]-1,4-dihydro-2,6-dimethyl-3,5-pyridinedicarboxylic acid di-Me ester (II) (cyano guanidine) is reported. 4-Amino-N-arylpiperidines serve as effective bioisosteres for N-arylpiperazines in the series of dihydropyridine NPY<sub>1</sub> receptor antagonists. These were prepared by a ZnCl<sub>2</sub>-mediated reductive amination reaction between elaborated primary amines, 2 or 5, and 4-arylpiperidones. An example compound was the isosteric piperidiylamino analog III of the lead compound I. Both, cyanoguanidine and urea analogs were evaluated for their biol. activity.

RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 3 OF 22 CASREACT COPYRIGHT 2005 ACS on STN

RX(4) OF 4 COMPOSED OF RX(3), RX(1)

RX(4) F + J + B ==&gt; C

● 2 Cl<sup>-</sup>C  
YIELD 60%

RX(3)    RCT    F 41410-39-3, J 71-36-3  
           RGT    K 7447-39-4 CuCl<sub>2</sub>  
           PRO    A 362468-73-3  
           SOL    71-36-3 BuOH  
           CON    1 hour, reflux

RX(1)    RCT    A 362468-73-3, B 107-15-3  
           PRO    C 723243-24-1  
           SOL    7732-18-5 Water, 64-17-5 EtOH  
           CON    30 minutes

AN 141:133072 CASREACT

TI    Molecular magnetic properties of two-copper(II) containing complexes  
       [Cu(II) (1-phenylamidino-O-n-butylurea) en (H<sub>2</sub>O)]<sub>2</sub><sup>2+</sup> and [Cu(II)  
       sulfato-mono (1-phenylamidino-O-methylurea)]<sub>2</sub> An EPR study

AU    Sharma, L. Ajitkumar; Singh, O. Ibopishak; Singh, AK. Manihar; Singh, R.  
       K. Hemakumar; Kadam, Ramakant M.; Bhide, Madhusudan K.; Dhobale, Ashok R.;  
       Sastry, Medury D.

CS Department of Chemistry, Manipur University, Imphal, 795003, India

SO    Spectrochimica Acta, Part A: Molecular and Biomolecular Spectroscopy  
       (2004), 60A(7), 1593-1600

CODEN: SAMCAS; ISSN: 1386-1425

PB Elsevier

DT Journal

LA English

AB    EPR studies were conducted on [Cu(II) (1-phenylamidino-O-n-butylurea) en  
       (H<sub>2</sub>O)]<sub>2</sub><sup>2+</sup> (1) and [Cu(II) sulfato-mono (1-phenylamidino-O-methylurea)]<sub>2</sub>



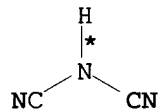
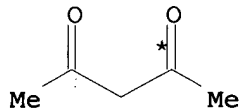
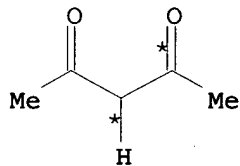
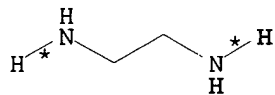
(2), resp., in the temperature range 300-77 K Fine structure characteristics of  $S = 1$  system, was observed in both complexes with zero field splitting of 0.0525 and 0.0225  $\text{cm}^{-1}$ , resp., suggesting the formation of dimeric complexes. The presence of the half-field signal ( $\Delta M_s = \pm 2$ ), in the complex 1, further confirmed the formation of dimer. The temperature dependence of EPR signal intensity gave evidence for the ferromagnetic (FM) coupling between the two  $\text{Cu}^{2+}$  ions. The isotropic exchange interaction consts.  $J$ , were evaluated from this and are .apprx.57 and .apprx.27  $\text{cm}^{-1}$ , resp., for the complexes 1 and 2. The photoacoustic spectra of these complexes had shown a band around 26,400  $\text{cm}^{-1}$  characteristic of metal-metal bonding giving an independent support for the existence of dimeric  $\text{Cu}^{2+}$  species. The high magnetic moment values at room temperature for complex 1 (2.68  $\mu_B$ ) and complex 2 (2.00  $\mu_B$ ), obtained from the magnetic susceptibility measurements, support the formation of ferromagnetically coupled  $\text{Cu}^{2+}$  dimers.

RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 4 OF 22 CASREACT COPYRIGHT 2005 ACS on STN

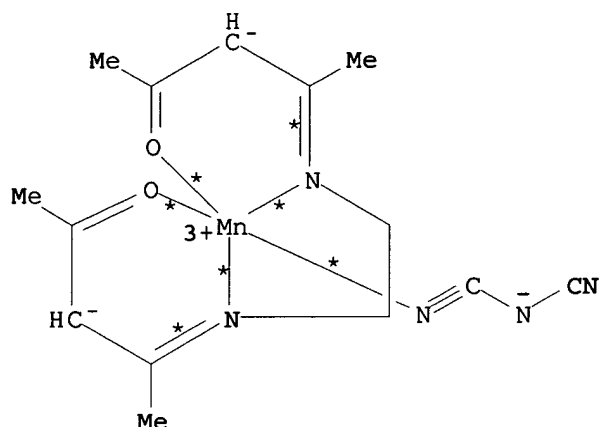
RX(10) OF 10 COMPOSED OF RX(1), RX(4), RX(5)

RX(10) A + 2 B + L ==> M



L

3  
STEPS  
→



M

RX(1) RCT A 107-15-3, B 123-54-6  
 PRO C 6310-76-5  
 SOL 107-15-3 H<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>

RX(4) RCT C 6310-76-5  
 RGT J 638-38-0 Mn(OAc)<sub>2</sub>  
 PRO I 62126-45-8  
 SOL 67-56-1 MeOH  
 CON 3 hours, reflux

RX(5) RCT I 62126-45-8, L 1934-75-4  
 PRO M 660866-18-2  
 SOL 67-56-1 MeOH, 7732-18-5 Water  
 CON 5 days, room temperature

AN 140:209322 CASREACT

TI Synthesis of Schiff base coordination compounds of Cu(II), Ni(II), Mn(III) and Mn(III) supermolecules

AU Wang, Shou-wu; Yu, Hong-mei; Wang, Shou-jian; Li, Bao-Long

CS Dept. of Mechanical and Electronic Engineering, Donggang College, Huaihai Institute of Technology, Lianyungang, 222069, Peop. Rep. China

SO Huaihai Gongxueyuan Xuebao, Ziran Kexueban (2003), 12(1), 42-44

CODEN: HGXZA5; ISSN: 1672-6685

PB Huaihai Gongxueyuan Xuebao Bianjibu

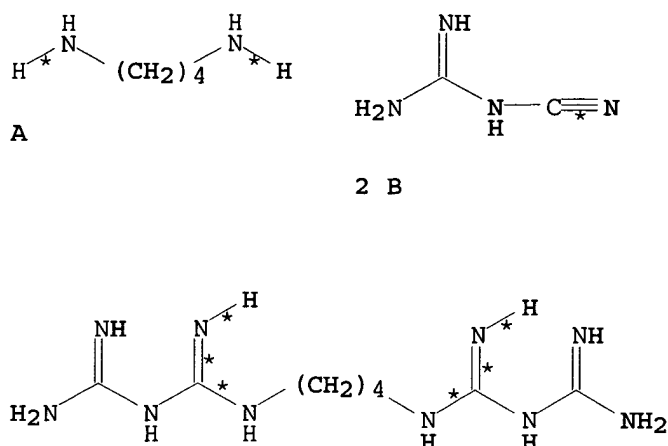
DT Journal

LA Chinese

AB Transition metal Schiff base complexes [MeC(O)CHC(Me)NCH<sub>2</sub>CH<sub>2</sub>NC(Me)CHC(O)Me]<sub>x</sub>MCl<sub>x</sub> (1, M = Ni(II), x = 0; 2, M = Cu(II), x = 0; 3, M = Mn(III), x = 1) were synthesized and characterized by elemental anal. Reaction of 3 with NaN(CN)<sub>2</sub> afforded a Mn(III) supermol. and its possible structure was revealed by IR spectrum anal.

L32 ANSWER 5 OF 22 CASREACT COPYRIGHT 2005 ACS on STN

RX(1) OF 7 A + 2 B ==> C



● 2 HCl

C  
YIELD 33%

RX(1) RCT A 110-60-1, B 461-58-5

STAGE(1)

CAT 7447-39-4 CuCl<sub>2</sub>  
 SOL 7732-18-5 Water  
 CON SUBSTAGE(1) 0.5 hours, room temperature  
 SUBSTAGE(2) room temperature -> 60 deg C  
 SUBSTAGE(3) 1 deg C, 60 atm  
 SUBSTAGE(4) 60 deg C -> reflux  
 SUBSTAGE(5) 48 hours, reflux

STAGE(2)

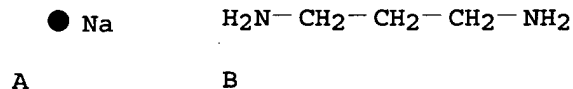
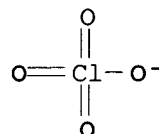
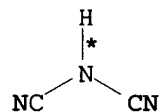
RGT D 7783-06-4 H<sub>2</sub>S, E 7647-01-0 HCl  
 SOL 7732-18-5 Water  
 CON pH 6 - 7

PRO C 7047-00-9

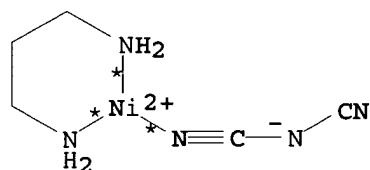
AN 140:192183 CASREACT  
 TI Synthesis and antibacterial activity of new alkylenedibiguanides  
 AU Wang, Yi; You, Qidong; Zhou, Weicheng  
 CS Department of Chemical Engineering, Nanjing University of Science and Technology, Nanjing, 210094, Peop. Rep. China  
 SO Zhongguo Yiyao Gongye Zazhi (2003), 34(3), 107-109  
 CODEN: ZYGZEA; ISSN: 1001-8255  
 PB Zhongguo Yiyao Gongye Zazhi Bianjibu  
 DT Journal  
 LA Chinese  
 AB Seven new alkylenedibiguanides were designed and synthesized from cyanoguanidine by adding with H<sub>2</sub>N(CH<sub>2</sub>)<sub>n</sub>NH<sub>2</sub> (n = 4 - 10) in the presence of CuCl<sub>2</sub> as complexing agent, and then precipitating with H<sub>2</sub>S to remove Cu<sup>2+</sup>. The preliminary test in vitro showed that some of them had potential antibacterial activity.

L32 ANSWER 6 OF 22 CASREACT COPYRIGHT 2005 ACS on STN

RX(1) OF 3 A + B ==&gt; C



C: CM 1



C: CM 2

RX(1)      RCT    A 1934-75-4, B 109-76-2  
              RGT    D 13637-71-3 Perchloric acid, nickel(2+) salt  
              PRO    C 645388-23-4  
              SOL    67-56-1 MeOH, 7732-18-5 Water  
              CON    room temperature  
              NTE    safety

AN 140:103840 CASREACT

TI Syntheses, structures and magnetic properties of 1-D complex  
 { [Ni(μ<sub>1</sub>,5-dca)(pn)<sub>2</sub>](ClO<sub>4</sub>) }<sub>n</sub>, 2-D complex [Mn(μ<sub>1</sub>,5-dca)<sub>2</sub>(phen)]<sub>n</sub> and  
 3-D complex [Mn(μ<sub>1</sub>,5-dca)<sub>2</sub>L]<sub>n</sub> (dca = dicyanamide, N(CN)<sub>2</sub>; pn =  
 1,3-propanediamine; phen = phenanthroline; L = 4,4'-ditriazolemethane)

AU Dong, Wen; Wang, Qing-Lun; Liu, Zhan-Quan; Liao, Dai-Zheng; Jiang,  
 Zong-Hui; Yan, Shi-Ping; Cheng, Peng

CS Department of Chemistry, Nankai University, Tianjin, 300071, Peop. Rep.  
 China

SO Polyhedron (2003), 22(25-26), 3315-3319  
 CODEN: PLYHDE; ISSN: 0277-5387

PB Elsevier

DT Journal

LA English

AB Three novel dicyanamide complexes { [Ni(μ<sub>1</sub>,5-dca)(pn)](ClO<sub>4</sub>) }<sub>n</sub> (I),  
 [Mn(μ<sub>1</sub>,5-dca)<sub>2</sub>(phen)]<sub>n</sub> (II) and [Mn(μ<sub>1</sub>,5-dca)<sub>2</sub>L]<sub>n</sub> (III) (dca =  
 dicyanamide, N(CN)<sub>2</sub>; pn = 1,3-propanediamine; phen = phenanthroline; L =  
 4,4'-ditriazolemethane) were synthesized and structurally characterized.  
 Complex I forms 1-dimensional chain and II forms 2-dimensional layer  
 structure, which are both bridged via μ<sub>1</sub>,5-dca ligands. Whereas  
 complex III contains 3-dimensional networks bridging via μ<sub>1</sub>,5-dca and  
 4,4'-ditriazolemethane ligands. The magnetic measurements indicate that  
 all these complexes exhibit weak antiferromagnetic interaction through the  
 five-atom [NCNCN]- bridging ligands, with J = -6.3, -1.3 and -1.1 cm<sup>-1</sup> for  
 complex I, II and III, resp.

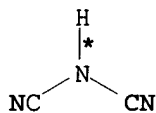
RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 7 OF 22 CASREACT COPYRIGHT 2005 ACS on STN

RX(1) OF 1 A + 2 B ==> C

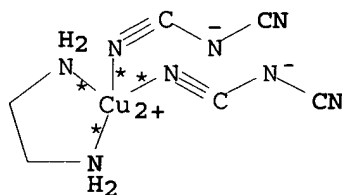
H<sub>2</sub>N-CH<sub>2</sub>-CH<sub>2</sub>-NH<sub>2</sub>

A



● Na

2 B



C  
YIELD 71%

RX(1) RCT A 107-15-3

STAGE(1)

RGT D 7447-39-4 CuCl<sub>2</sub>

SOL 67-56-1 MeOH

CON 20 minutes, room temperature

STAGE(2)

RCT B 1934-75-4

CON SUBSTAGE(1) 30 minutes

SUBSTAGE(2) >1 day, room temperature

PRO C 620158-26-1

AN 139:373664 CASREACT

TI [Cu(dca)<sub>2</sub>(en)]<sub>n</sub>: a two-dimensional copper(II) coordination polymer with both  $\mu$ 1,5-dca and pseudo- $\mu$ 1,3-dca bridges

AU Xu, Y.-Q.; Luo, J.-H.; Yuan, D.-Q.; Xu, Y.; Cao, R.; Hong, M.-C.

CS Fujian Institute of the Research on the Structure of Matter, State key Laboratory of Structural Chemistry, Chinese Academy of Science, Fujian, 350002, Peop. Rep. China

SO Journal of Molecular Structure (2003), 658(3), 223-228

CODEN: JMOSB4; ISSN: 0022-2860

PB Elsevier Science B.V.

DT Journal

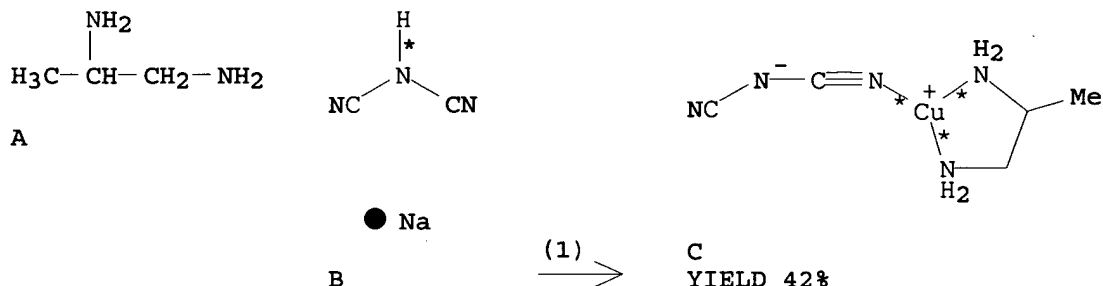
LA English

AB A Cu(II)-dicyanamide (dca = dicyanamide anion, [N(CN)<sub>2</sub>]<sup>-</sup>) compound, [Cu(dca)<sub>2</sub>(en)]<sub>n</sub> (1) (en = ethylenediamine), was synthesized and its structure was determined by single x-ray diffraction anal. It crystallizes in the monoclinic space group C2/c with a 12.031(2), b 8.614(1), c 19.528(3) Å,  $\beta$  99.499°, Z = 8. 1 is the 1st coordination polymer containing both  $\mu$ 1,5-dca and pseudo- $\mu$ 1,3-bridging dca. The adjacent Cu atoms are connected by dca with  $\mu$ 1,5-bridging mode to form a chain structure. Also, the chains are cross linked via the pseudo- $\mu$ 1,3-bridging dca into a 2-dimensional layer structure. Magnetic characterization of 1 suggests that the complex exhibits a weak antiferromagnetic interaction between the Cu(II) ions.

RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 8 OF 22 CASREACT COPYRIGHT 2005 ACS on STN

RX(1) OF 1 A + B ==&gt; C



RX(1) RCT A 78-90-0, B 1934-75-4  
 RGT D 13770-18-8 Cu(ClO<sub>4</sub>)<sub>2</sub>  
 PRO C 591766-94-8  
 SOL 68-12-2 DMF, 64-17-5 EtOH  
 CON SUBSTAGE(1) room temperature  
 SUBSTAGE(2) 2 weeks, room temperature

AN 139:239058 CASREACT

TI A novel coordination polymer with dicyanamide ligand: multi-dimensional architecture stabilized by hydrogen bonding

AU Chen, Xiao-Yan; Cheng, Peng; Zhao, Bin; Yan, Shi-Ping; Liao, Dai-Zheng; Jiang, Zong-Hui

CS Department of Chemistry, Nankai University, Tianjin, 300071, Peop. Rep. China

SO Journal of Molecular Structure (2003), 655(1), 179-184

CODEN: JMOSB4; ISSN: 0022-2860

PB Elsevier Science B.V.

DT Journal

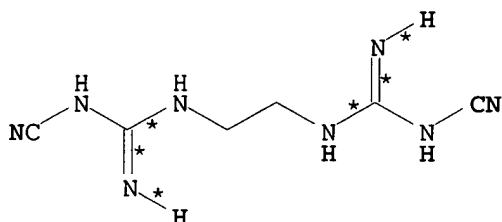
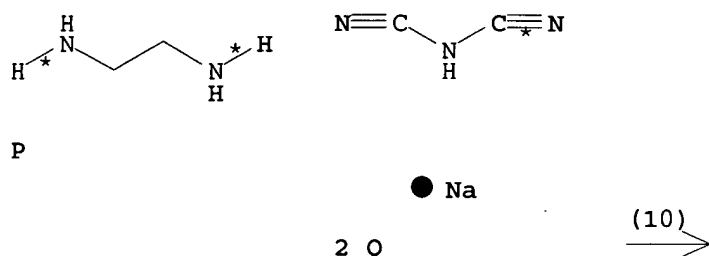
LA English

AB A novel dicyanamide (dca) complex, [Cu(pn)(dca)<sub>2</sub>]<sub>n</sub> (pn = 1,2-diaminopropane), was synthesized and characterized. X-ray diffraction anal. reveals that the title complex crystallizes in the monoclinic space group C2/c with a = 12.436(5) Å, b = 8.395(3) Å, c 20.747(8) Å, β 96.662(6)°, Z = 8, and R1 = 0.0476, wR2 = 0.1094. The complex exhibits 1-dimensional zigzag chain structure constructed by μ<sub>1,5</sub>-dca bridges. The coordination geometry around the Cu atom was a distorted square-pyramid. The spectroscopic and magnetic properties also are discussed.

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 9 OF 22 CASREACT COPYRIGHT 2005 ACS on STN

RX(10) OF 20 P + 2 Q ==&gt; A...



A  
YIELD 85%

RX(10) RCT P 107-15-3, Q 1934-75-4  
PRO A 7408-98-2  
SOL 71-36-3 BuOH  
CON 6 hours, reflux

AN 139:222994 CASREACT

TI Hydrogen-bonded supramolecular synthons in complexes of copper(II) halides with polymethylene-linked bis(amidino-O-alkylurea) ligands

AU Suksangpanya, Unchulee; Blake, Alexander J.; Hubberstey, Peter; Wilson, Claire

CS Sch. Chem., Univ. Nottingham, Nottingham, NG7 2RD, UK

SO CrystEngComm (2002), 4, 552-563

CODEN: CRECF4; ISSN: 1466-8033

URL: <http://www.rsc.org/CFCart/displayarticleonfree.cfm?article=8%2D9%223%24%5DVZB%214%2E%5FL5%286%2CO%5B7%3DD5PET%3D29%23%3C%0A>

%24%5DVZB%214%2E%5FL5%286%2CO%5B7%3DD5PET%3D29%23%3C%0A

PB Royal Society of Chemistry

DT Journal; (online computer file)

LA English

AB Elegant supramol. architectures are formed by Cu(II) halide complexes of polymethylene-linked bis(amidino-O-alkylurea) ligands (L2m: C2-linked, alkyl = Me; L3m: C3-linked, alkyl = Me; L2e: C2-linked, alkyl = Et; L3e: C3-linked, alkyl = Et). The tetradentate ligands coordinate Cu(II) to give square planar [CuL]2+ complex cations, which, owing to their versatile H-bonding capacity, form diverse H-bonded supramol. synthons with the anions. Structural anal. of four chlorides, [CuL2m]Cl2·2H2O 1, [CuL2e]Cl2·MeOH·3H2O 2a, [CuL3m]Cl2·MeOH·0.5H2O 5a and [CuL2m]4 [CuCl4]Cl6·5H2O 9, and a single bromide, [CuL3m]Br2·MeOH·0.3H2O 7a, revealed two conserved supramol. synthons, one of which is present in four structures, the other of which is present in three structures. The basic building block in 2a, 5a, 7a and 9 is a H-bonded 1-dimensional chain of alternating [CuL]2+ cations and halide anions. A slightly modified motif, including a H2O mol., occurs in 1. The chains are linked into

2-dimensional sheets by H-bonding contacts involving the anions and solvate (water and/or MeOH)mols., either directly (1) or via formation of ribbons (2a, 5a, 7a and 9). When linked directly the cations in adjacent chains are parallel, but when linked via ribbons they are alternating.

3-D frameworks result from a combination of elongated axial

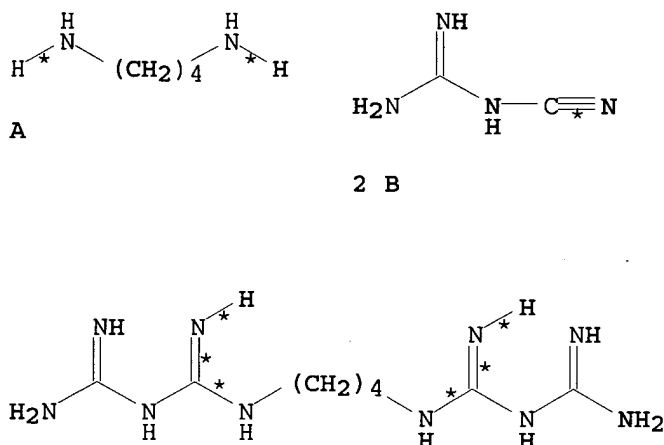
Cu...Cl contacts and complex H-bonding contacts

involving the anions and solvate mols.

RE.CNT 92 THERE ARE 92 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 10 OF 22 CASREACT COPYRIGHT 2005 ACS on STN

RX(1) OF 7 A + 2 B ==> C



RX(1) RCT A 110-60-1, B 461-58-5

STAGE(1)

RGT D 7447-39-4 CuCl2

SOL 7732-18-5 Water

CON SUBSTAGE(1) .5 hours, room temperature

SUBSTAGE(2) room temperature -> 80 deg C

SUBSTAGE(3) 48 hours, 80 deg C

STAGE(2)

RGT E 7783-06-4 H2S

SOL 7732-18-5 Water

CON room temperature

STAGE(3)

RGT F 7647-01-0 HCl

SOL 7732-18-5 Water

CON room temperature, pH 7

PRO C 31032-80-1

AN 138:237778 CASREACT

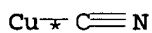
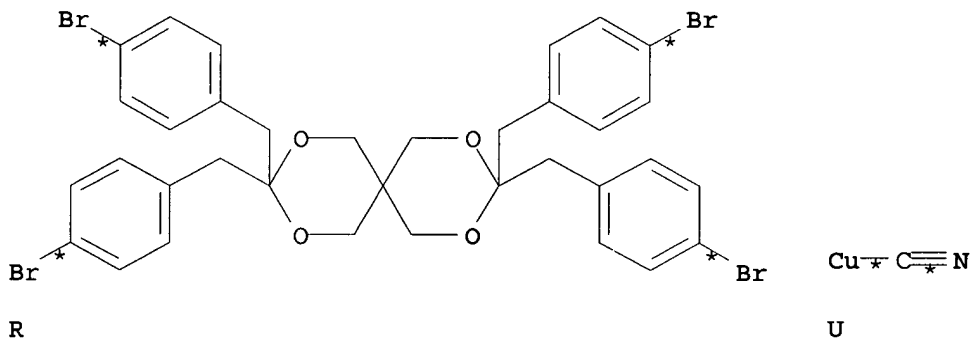
TI Synthesis and antibacterial effect of new alkylenedibiguanides



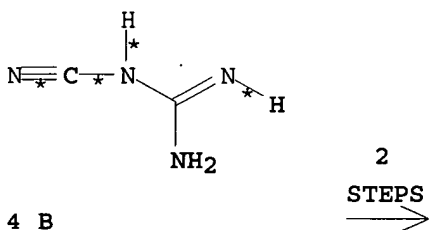
AU Wang, Yi; You, Qidong; Zhou, Weicheng  
CS Department of Chemical Engineering, Nanjing University of Science and  
Technology, Nanjing, 210094, Peop. Rep. China  
SO Journal of Chinese Pharmaceutical Sciences (2002), 11(2), 19-21  
CODEN: JCHSE4; ISSN: 1003-1057  
PB Beijing Medical University, School of Pharmaceutical Sciences  
DT Journal  
LA English  
AB Seven new alkylenedibiguanides were synthesized and confirmed by  $^1\text{H}$  NMR,  
MS and elemental analyses. The preliminary test in vitro showed that some  
of them had potential antibacterial activities.  
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 11 OF 22 CASREACT COPYRIGHT 2005 ACS on STN

RX(18) OF 34 COMPOSED OF RX(7), RX(1)  
RX(18) R + 4 U + 4 B ==> C

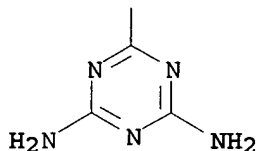


3 U



\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

PAGE 2-A



C  
YIELD 90%

RX(7) RCT R 493015-32-0, U 544-92-3

## STAGE(1)

SOL 68-12-2 DMF  
CON 48 hours, reflux

## STAGE(2)

RGT V 107-15-3 H<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>  
SOL 7732-18-5 Water

PRO A 493015-33-1

RX(1) RCT A 493015-33-1, B 461-58-5

RGT D 1310-58-3 KOH  
PRO C 493015-28-4  
SOL 109-86-4 MeCH<sub>2</sub>CH<sub>2</sub>OH  
CON 12 hours, reflux

AN 138:136795 CASREACT

TI Molecular Tectonics. Construction of Porous Hydrogen-Bonded Networks from Bisketals of Pentaerythritol

AU Sauriat-Dorizon, Helene; Maris, Thierry; Wuest, James D.; Enright, Gary D.  
CS Departement de Chimie, Departement de Chimie Universite de Montreal, Montreal, QC, H3C 3J7, Can.

SO Journal of Organic Chemistry (2003), 68(2), 240-246  
CODEN: JOCEAH; ISSN: 0022-3263

PB American Chemical Society

DT Journal

LA English

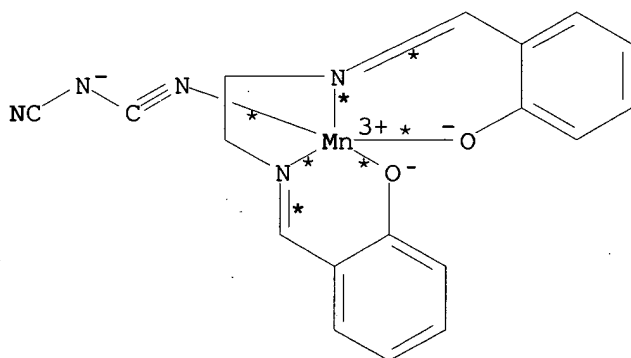
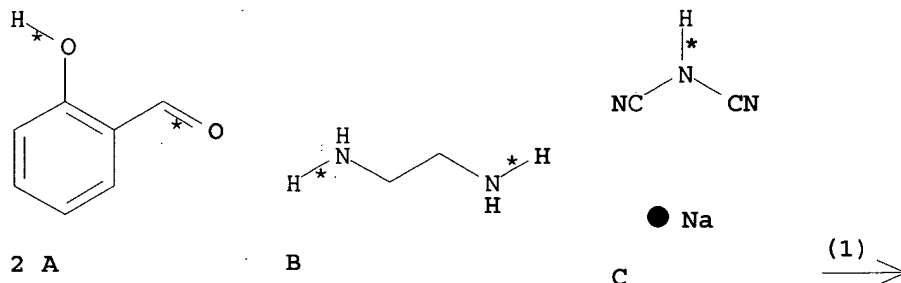
AB 2,4,8,10-Tetraoxaspiro[5,5]undecanes tetrasubstituted at the 3 and 9 positions with groups incorporating diaminotriazines can be used for the construction of extensively hydrogen-bonded networks by the strategy of mol. tectonics. Four such compds., tectons 1-4, were made by short and efficient syntheses involving bisketalization of pentaerythritol and subsequent reactions. Unlike tectons typically used in previous studies, compds. 1-4 are flexible and chiral, and they orient four sticky diaminotriazine groups in a distorted tetrahedral geometry. Tecton 1 crystallizes from DMF/toluene as an inclusion compound of approx. composition 1.8DMF·xH<sub>2</sub>O. In the resulting structure, each tecton participates in a total of 16 hydrogen bonds. Eight of these bonds involve four principal neighbors, and the tectons linked in this way define a distorted diamondoid network. Despite 8-fold interpenetration, 60% of the volume of the network is available for including guests. The guests are disordered and occupy parallel helical channels that have cross sections of approx. 11 + 12 Å<sup>2</sup> at the narrowest points. These channels provide access to the interior of the crystals and permit guests to be exchanged quant. without loss of crystallinity. It is noteworthy

that tecton 1, despite its flexibility, small size, and structural simplicity, is apparently unable to find a periodic three-dimensional structure in which the dictates of hydrogen bonding and close packing are satisfied simultaneously.

RE.CNT 66 THERE ARE 66 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 12 OF 22 CASREACT COPYRIGHT 2005 ACS on STN

RX(1) OF 2 2 A + B + C ==> D



D  
YIELD 69%

RX(1) RCT A 90-02-8, B 107-15-3

STAGE(1)

RGT E 638-38-0 Mn(OAc)2  
SOL 67-56-1 MeOH  
CON 0.5 hours, 60 deg C

STAGE(2)

RCT C 1934-75-4  
SOL 67-56-1 MeOH  
CON 3 days, room temperature

PRO D 478242-44-3

AN 138:32306 CASREACT

TI Syntheses, structures, electrochemistry and magnetic properties of

chain-like dicyanamide manganese(III) and iron(III) complexes with salen ligand

AU Shi, Qian; Cao, Rong; Li, Xing; Luo, Junhua; Hong, Maochun; Chen, Zhongning  
 CS The Chinese Academy of Sciences, Fujian Institute of Research on the Structure of Matter, State Key Laboratory of Structural Chemistry, Fuzhou, 350002, Peop. Rep. China  
 SO New Journal of Chemistry (2002), 26(10), 1397-1401  
 CODEN: NJCHE5; ISSN: 1144-0546  
 PB Royal Society of Chemistry  
 DT Journal  
 LA English  
 AB Two dicyanamide (dca) M(III) complexes with salen ligand, [Mn(III)(salen)(dca)]<sub>n</sub> (1) and [Fe(III)(salen)(dca)]<sub>n</sub> (2), were synthesized and characterized. X-ray diffraction analyses revealed the two complexes have a similar 1-dimensional zigzag chain structure constructed by  $\mu$ 1,5-dca bridges. Magnetic susceptibility measurements indicate antiferromagnetic interactions between two intra-chain high-spin Mn(III) ions and between two intra-chain low-spin Fe(III) ions via the dca bridge. The electrochem. properties of the two complexes were studied by cyclic voltammetry.

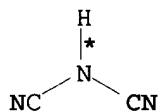
RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 13 OF 22 CASREACT COPYRIGHT 2005 ACS on STN

RX(1) OF 1 2 A + B ==> C

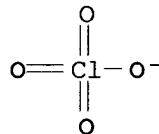
H<sub>2</sub>N-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-NH<sub>2</sub>

2 A

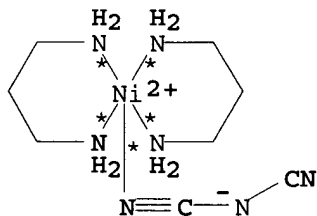


● Na

B



C: CM 1  
YIELD 86%



C: CM 2  
YIELD 86%

RX(1) RCT A 109-76-2

STAGE(1)

RGT D 13637-71-3 Perchloric acid, nickel(2+) salt

SOL 7732-18-5 Water  
CON 30 minutes, room temperature

## STAGE(2)

RCT B 1934-75-4  
SOL 7732-18-5 Water  
CON 2 weeks, room temperature

PRO C 478188-28-2

AN 138:32292 CASREACT

TI Synthesis and crystal structure of a new one-dimensional system with end-to-end single dicyanamide bridges between nickel(II) centres

AU Li, Baolong; Ding, Jiangang; Lang, Jianping; Xu, Zheng; Chen, Jiutong

CS Department of Chemistry and Chemical Engineering, Suzhou University, Suzhou, 215006, Peop. Rep. China

SO Journal of Molecular Structure (2002), 616(1-3), 175-179

CODEN: JMOSB4; ISSN: 0022-2860

PB Elsevier Science B.V.

DT Journal

LA English

AB  $[\text{Ni}(\text{tn})_2\{\text{N}(\text{CN})_2\}]\text{ClO}_4$  (tn = trimethylenediamine) was synthesized and the structure was determined by x-ray crystallog. The complex forms a 1-dimensional chain structure via the bidentate bridging ligand dicyanamide. A two-dimensional network is formed via interchain hydrogen bond interactions.

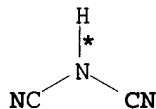
RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 14 OF 22 CASREACT COPYRIGHT 2005 ACS on STN

RX(1) OF 2 2 A + 4 B ==&gt; C

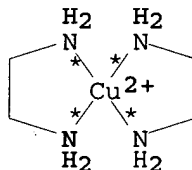
 $\text{H}_2\text{N}-\text{CH}_2-\text{CH}_2-\text{NH}_2$ 

2 A

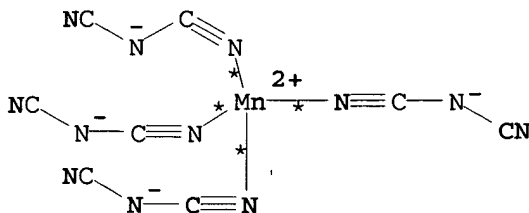


● Na

4 B



C: CM 1  
YIELD 14%



C: CM 2  
YIELD 14%

RX(1) RCT A 107-15-3, B 1934-75-4  
RGT D 7447-39-4 CuCl<sub>2</sub>, E 7773-01-5 MnCl<sub>2</sub>  
PRO C 444167-45-7  
SOL 64-17-5 EtOH, 7732-18-5 Water

AN 137:133947 CASREACT

TI Bimetallic sheet and 3D threefold interpenetrating diamond-like network constructed by chelate Cu cations and Mn dicyanamide polymeric chains. Synthesis, crystal structure, and magnetism of [Cu(L)<sub>2</sub>][Mn(dca)<sub>4</sub>] (L = ethylenediamine or 1,3-diaminopropane; dca = dicyanamide N(CN)<sub>2</sub>-)

AU Wang, Zhe-Ming; Sun, Bai-Wang; Luo, Jun; Gao, Song; Liao, Chun-Sheng; Yan, Chun-Hua; Li, Yong

CS Peking University, Peking University-Nonius B. V. Demo Lab for X-Ray Diffraction, PKU-HKU Joint Laboratory on Rare Earth Materials and Bioinorganic Chemistry, State Key Laboratory of Rare Earth Materials Chemistry and Applications, Beijing, 100871, Peop. Rep. China

SO Inorganica Chimica Acta (2002), 332, 127-134  
CODEN: ICHAA3; ISSN: 0020-1693

PB Elsevier Science B.V.

DT Journal

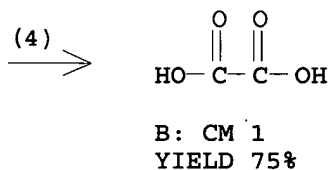
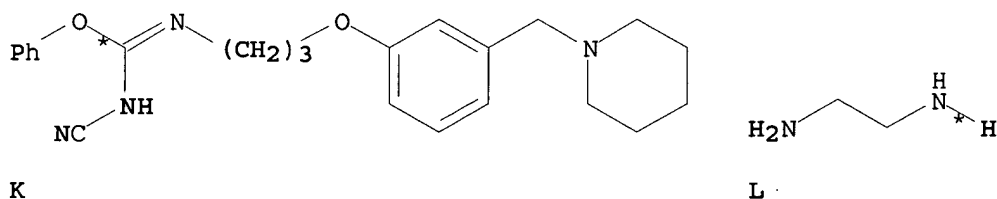
LA English

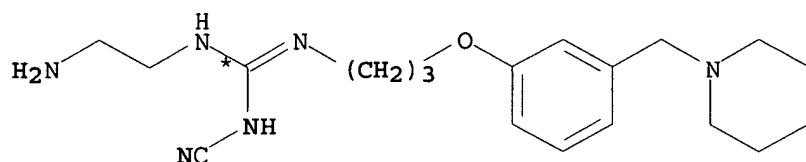
AB Two novel bimetallic coordination polymers, [Cu(en)<sub>2</sub>][Mn(dca)<sub>4</sub>] (1) and [Cu(pn)<sub>2</sub>][Mn(dca)<sub>4</sub>] (2) (en, ethylenediamine; pn, 1,3-diaminopropane; dca, dicyanamide N(CN)<sub>2</sub>-), were synthesized and characterized. Both of them consist of Mn-dca anionic chains and chelate cations of copper. 1 Has a sheet like architecture built by the [Cu(en)<sub>2</sub>]<sup>2+</sup> cations and the homoleptic trans-[Mn(dca)<sub>4</sub>]<sup>2-</sup> chains. 2 Shows unusual 3-dimensional 3-fold interpenetrating diamond-like structure constructed by [Cu(pn)<sub>2</sub>]<sup>2+</sup> cations and the homoleptic cis-[Mn(dca)<sub>4</sub>]<sup>2-</sup> chains. The magnetic susceptibilities obey the Curie-Weiss law with weak antiferromagnetic interactions.

RE.CNT 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 15 OF 22 CASREACT COPYRIGHT 2005 ACS on STN

RX (4) OF 9            **K + L** ==> B...





B: CM 2  
YIELD 75%

RX(4) RCT K 98078-91-2, L 107-15-3  
PRO B 333391-46-1  
SOL 141-78-6 AcOEt, 67-56-1 MeOH

AN 134:280509 CASREACT

TI Anti-Helicobacter pylori agents endowed with H2-antagonist properties

AU Sorba, G.; Bertinaria, M.; Di Stilo, A.; Gasco, A.; Scaltrito, M. M.; Brenciaglia, M. I.; Dubini, F.

CS Dipartimento di Scienze Chimiche, Alimentari, Farmaceutiche e Farmacologiche, Universita degli Studi del Piemonte Orientale, Novara, I-28100, Italy

SO Bioorganic & Medicinal Chemistry Letters (2001), 11(3), 403-406

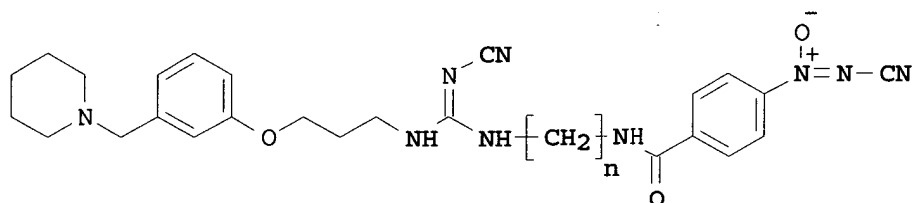
CODEN: BMCLE8; ISSN: 0960-894X

PB Elsevier Science Ltd.

DT Journal

LA English

GI



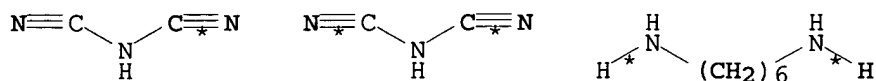
I

AB New anti-Helicobacter pylori (H. pylori) agents endowed with H2-antagonists properties were obtained by combining the lamtidine derived pharmacophoric group with the antibiotic calvatic acid. All the compds (I; n = 2, 4, 6) were tested for their irreversible H2-antagonist properties and for their ability to inhibit 20 H. pylori strains, two of them metronidazole resistant. The most active derivative I (n = 4) displayed antimicrobial activity similar to metronidazole. The synthesis and pharmacol. of new anti-Helicobacter pylori agents endowed with H2-antagonist properties are reported.

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 16 OF 22 CASREACT COPYRIGHT 2005 ACS on STN

RX(1) OF 8 2 A + B + C ==> D...



● Na

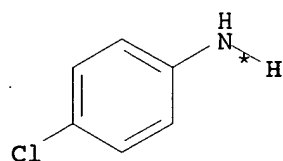
● Na

● 2 HCl

A

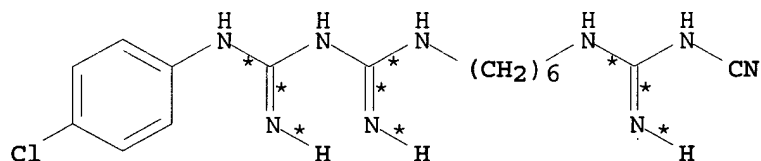
A

B



● HCl

C



D

YIELD 4%

RX(1) RCT A 1934-75-4, B 6055-52-3

STAGE(1)

SOL 71-36-3 BuOH

STAGE(2)

RCT C 20265-96-7

SOL 110-80-5 EtOCH2CH2OH

PRO D 152504-08-0

NTE product depends on stoichiometry

AN 123:111639 CASREACT

TI Synthesis of Chlorhexidine Digluconate Impurities

AU Reville, Larry K.; Rutter, Aaron M.; Wilson, Joe A.

CS Division of Drug Analysis, Food and Drug Administration, St. Louis, MO, 63101, USA

SO Journal of Agricultural and Food Chemistry (1995), 43(5), 1299-301

CODEN: JAFCAU; ISSN: 0021-8561



PB American Chemical Society

DT Journal

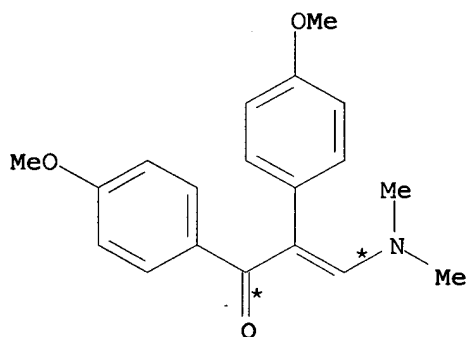
LA English

AB Five new biguanides, found as impurities in chlorhexidine digluconate solns., were synthesized by addition of amines to aminonitriles. Nonstoichiometric addns. required to prepare the unsym. biguanides resulted in low yields of the desired impurities, which were isolated by flash chromatog. and characterized by HPLC-UV, HPLC-MS, and <sup>1</sup>H NMR.

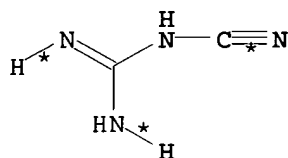
L32 ANSWER 17 OF 22 CASREACT COPYRIGHT 2005 ACS on STN

RX(42) OF 86 COMPOSED OF RX(4), RX(11)

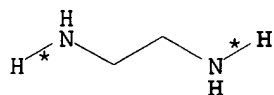
RX(42) C + L + Z ==&gt; AA



C

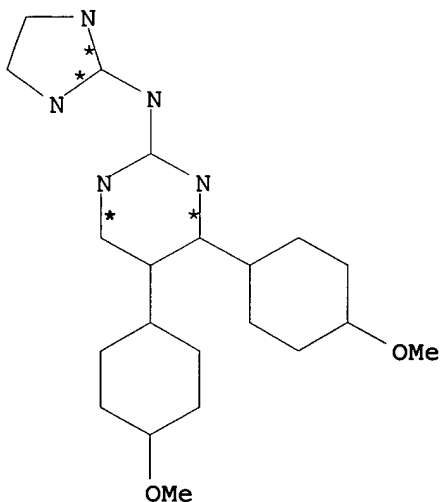


L



Z

● 2 HCl

2  
STEPS  
→AA  
YIELD 30%

RX(4) RCT C 163889-26-7, L 461-58-5  
RGT G 124-41-4 NaOMe  
PRO M 141424-86-4

SOL 67-56-1 MeOH, 64-17-5 EtOH

RX(11) RCT M 141424-86-4, Z 333-18-6  
 PRO AA 163889-29-0  
 SOL 64-17-5 EtOH

AN 123:9410 CASREACT

TI Studies on anti-platelet agents. IV. A series of 2-substituted  
 4,5-bis(4-methoxyphenyl)pyrimidines as novel anti-platelet agents

AU Tanaka, Akito; Motoyama, Yukio; Takasugi, Hisashi

CS New Drug Research Laboratories, Fujisawa Pharmaceutical Co., Ltd., Osaka,  
 532, Japan

SO Chemical & Pharmaceutical Bulletin (1994), 42(9), 1828-34

CODEN: CPBTAL; ISSN: 0009-2363

PB Pharmaceutical Society of Japan

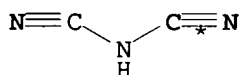
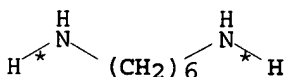
DT Journal

LA English

AB The syntheses and structure-activity relationships of a series of  
 2-substituted 4,5-bis(4-methoxyphenyl)pyrimidines, designed on the basis  
 of structural analyses of several cyclooxygenase (CO) inhibitors, and  
 their derivs. as anti-platelet agents based on CO inhibition are  
 described. Among them, 4,5-bis(4-methoxyphenyl)-2-morpholinopyrimidine  
 and 4,5-bis(4-methoxyphenyl)-2-(3,5-dimethylmorpholin-4-yl)pyrimidine  
 showed potent inhibitory activity on malondialdehyde, formed by the  
 CO-catalyzed oxygenation of arachidonic acid (A.A.) in prostanoids, production  
 in vitro (73.4% inhibition at  $10^{-8}$  M and  $IC_{50} = 1.4 \times 10^{-8}$  M,  
 resp.). Certain compds. were also examined in ex vivo studies. Of these  
 compds., 4,5-bis(4-methoxyphenyl)-2-(1-methyl-1,2,3,6-tetrahydropyrid-4-  
 yl)pyrimidine (11a) exhibited potent and long-lasting anti-platelet  
 activity ex vivo, i.e., 11a showed 97% inhibition of platelet aggregation  
 induced by A.A. even 24 h after oral administration of 3.2 mg/kg in guinea  
 pigs, and 60-70% inhibition at 6 h after lower doses (1.0 mg/kg). The ex  
 vivo activity of 11a is more than three times that of aspirin (aspirin  
 showed 81% inhibitory activity on platelet aggregation induced by A.A. at  
 6 h after oral administration at 10 mg/kg in this study). Compound 11a also  
 showed vasodilatory activity ( $ED_{50} = 5.3 \times 10^{-6}$  M, while aspirin has  
 no vasodilatory activity at  $6.0 \times 10^{-4}$  M).

L32 ANSWER 18 OF 22 CASREACT COPYRIGHT 2005 ACS on STN

RX(1) OF 3 A + 2 B ==&gt; C...



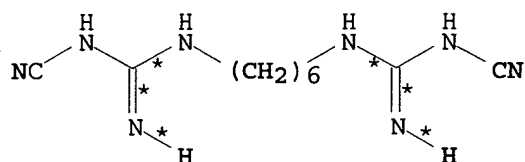
● 2 HCl

● Na

A

2 B





C  
YIELD 90%

RX(1) RCT A 6055-52-3, B 1934-75-4  
PRO C 15894-70-9  
SOL 71-36-3 BuOH

AN 120:298254 CASREACT

TI Process for manufacture of hexanediamine hydrochloride, p-chloroaniline hydrochloride, and biscyanoguanidinehexanediamine, for preparation of technical chlorhexidine dihydrochloride, chlorhexidine base, digluconate, acetate, and hydrochloride

IN Fioravanti, Claudio; De Castro e Souza, Luiz Otavio

PA Brazil

SO Braz. Pedido PI, 39 pp.

CODEN: BPXXDX

DT Patent

LA Portuguese

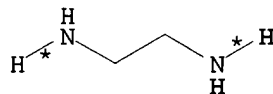
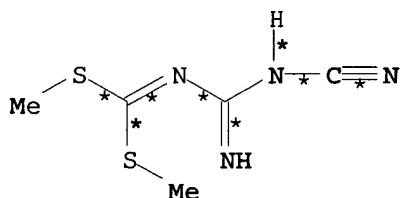
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	BR 9300129	A	19930824	BR 1993-129	19930113
PRAI	BR 1993-129		19930113		

AB The antibacterial and antiseptic agent chlorhexidine (I) and salts are prepared via the title intermediates. Thus,  $\text{H}_2\text{N}(\text{CH}_2)_6\text{NH}_2$  was converted by concentrated HCl to its di-HCl salt (II). Similarly, p-ClC<sub>6</sub>H<sub>4</sub>NH<sub>2</sub> was converted to its HCl salt (III) in aqueous EtOH in 90% yield. Reaction of II with 2 equiv NaN(CN)<sub>2</sub> in n-BuOH gave 90% N.tplbond.CNHC(:NH)NH(CH<sub>2</sub>)<sub>6</sub>NHC(:NH)NHC.tplbond.N, which reacted with 2 equiv III in aqueous EtOH to give 85-90% I.2HCl. Addnl. examples cover conversion of the latter to I base (95%), digluconate, acetate (93%), and pharmaceutical grade hydrochloride (80%). Information on apparatus, starting materials, reaction conditions, anal., wastes, etc. is provided.

L32 ANSWER 19 OF 22 CASREACT COPYRIGHT 2005 ACS on STN

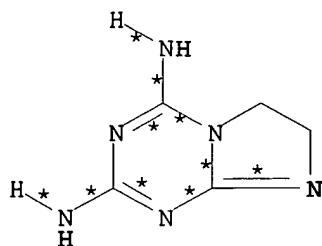
RX(21) OF 87 ...C + AK ==> AL



C

AK

(21) →



AL

YIELD 52%

RX(21) RCT C 15048-19-8, AK 107-15-3

PRO AL 14612-41-0

SOL 123-91-1 Dioxane

AN 113:6288 CASREACT

TI Synthesis of hydrotriazines from dimethyl N-(N2-cyanoamidino)carbonimidodithioate

AU Suyama, Takayuki; Yanagi, Massaki; Iio, Katsuji; Ikeda, Shigeru; Miki, Atsushi

CS Dep. Chem. Process Eng., Kanazawa Inst. Technol., Atsugi, 243-02, Japan

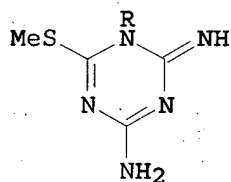
SO Nippon Kagaku Kaishi (1990), (2), 173-8

CODEN: NKAKB8; ISSN: 0369-4577

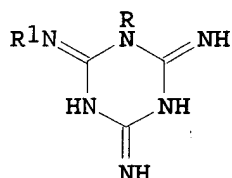
DT Journal

LA Japanese

GI



II

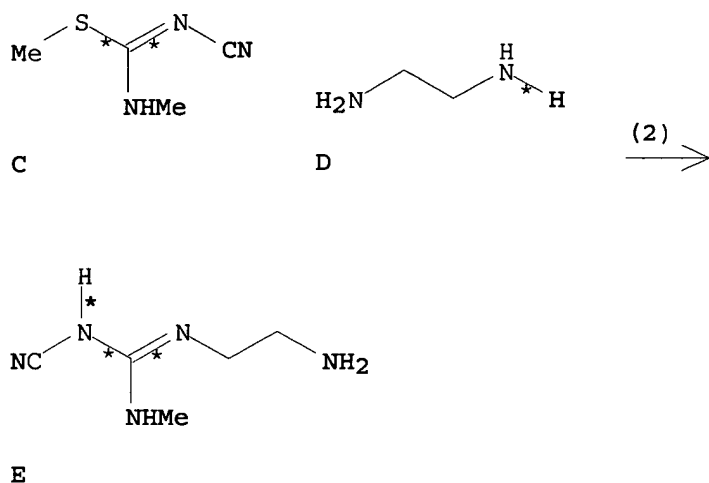


III

AB The reactions of the title compound (MeS)<sub>2</sub>C:NC(NH<sub>2</sub>):NCN (I) with amines were investigated and several 1-substituted hydrotriazines were prepared. I reacted with primary amines below room temperature to give N-substituted N'-(N2-cyanoamidino)-S-methylisothiourea, which easily cyclized to 1-substituted 4-amino-2-imino-6-methylthio-1,2-dihydro-1,3,5-triazines II (R = Me, Bu, PhCH<sub>2</sub>) by warming up to 30°. The reaction of I with aniline hydrochloride in ethanol yielded 1-phenylhydrotriazine, whereas in dioxane, 2-amino-4-methylthio-6-phenylamino-1,3,5-triazine was obtained. II reacted with amines in the presence of acid and with cyanamide in the presence of alkali to produce corresponding 1,2-disubstituted isomelamines III (R<sub>1</sub> = Me, Me<sub>2</sub>CH, Bu, PhCH<sub>2</sub>) in good yield.

L32 ANSWER 20 OF 22 CASREACT COPYRIGHT 2005 ACS on STN

RX(2) OF 6 ...C + D ==&gt; E...



RX(2) RCT C 5848-24-8, D 107-15-3

PRO E 69049-46-3

AN 110:231668 CASREACT

TI Preparation and formulation of antihypertensive pyrazinecarboxamides

IN Magatti, Charles V.; Doll, Ronald J.

PA Schering Corp., USA

SO U.S., 5 pp.

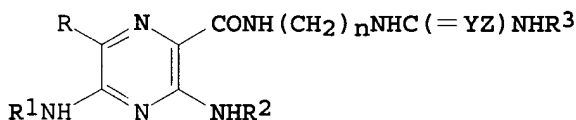
CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

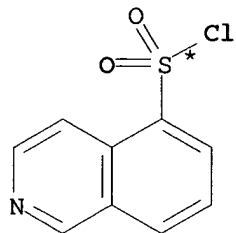
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4803206	A	19890207	US 1988-164594	19880307
PRAI	US 1988-164594		19880307		
OS	MARPAT 110:231668				
GI					



AB The title compds. [I; R = halo; R1, R2 = H, alkyl; R3 = H, alkyl, (un)substituted aryl, heteroaryl, alkylaryl, alkylheteroaryl, wherein aryl is a C6-10 carbocyclic aromatic or fused ring, heteroaryl is a 5- or 6-membered aromatic ring with 1-3 members selected from O, N, S, etc.; Y = CH, N; Z = H, cyano, CONH2; n = 2-6] and their pharmaceutically acceptable addition salts, useful as antihypertensives (no data), are prepared. MeSC:N(CN)SMe was successively treated with MeNH2 and NH2CH2CH2NH2 to give H2NCH2CH2NHC:N(CN)NHMe which was treated with 3,5-diamino-6-chloropyrazinecarboxylic acid and carbonyldiimidazole in DMF to give, after acidification, I.HCl (R = Cl, R1 = R2 = H, Y = N, Z = cyano, R3 = Me, n = 2).

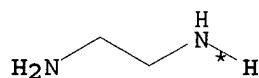
L32 ANSWER 21 OF 22 CASREACT COPYRIGHT 2005 ACS on STN

RX(46) OF 80 COMPOSED OF RX(7), RX(20)  
RX(46) B + W + AS ==> AT

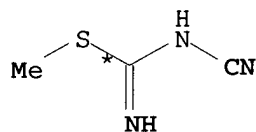


● HCl

B

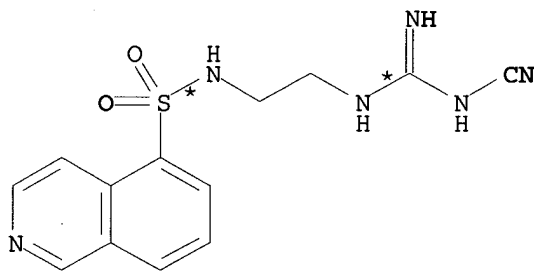


W



AS

2  
STEPS  
→



● HCl

AT  
YIELD 27%

RX(7) RCT B 105627-79-0

STAGE(1)

RGT G 144-55-8 NaHCO3  
SOL 7732-18-5 Water

STAGE(2)

RCT W 107-15-3  
SOL 75-09-2 CH2Cl2

STAGE(3)

RGT P 7647-01-0 HCl

PRO X 116700-36-8

RX(20) RCT X 116700-36-8, AS 15760-26-6

## STAGE(1)

RGT AG 1310-73-2 NaOH  
SOL 7732-18-5 Water

## STAGE(2)

RGT P 7647-01-0 HCl  
SOL 7732-18-5 Water

PRO AT 116724-50-6

AN 110:38855 CASREACT

TI 5-Isoquinolinesulfonamide derivatives. 1. Synthesis and vasodilatory activity of N-(2-guanidinoethyl)-5-isoquinolinesulfonamide derivatives

AU Morikawa, Anri; Sone, Takanori; Asano, Toshio

CS Dep. Med. Chem., Asahi Chem. Ind. Co., Ltd., Nobeoka, 882, Japan

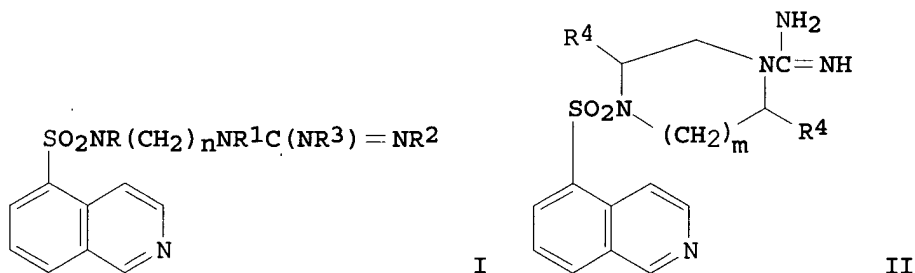
SO Journal of Medicinal Chemistry (1989), 32(1), 42-6

CODEN: JMCMAR; ISSN: 0022-2623

DT Journal

LA English

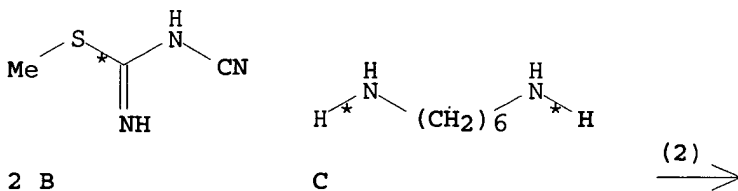
GI

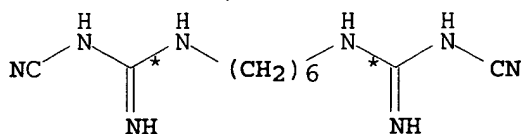


AB Two novel series of N-(guanidinoalkyl)-5-isoquinolinesulfonamides, I [ $n = 0, 2-4, 6$ ;  $R = H, Me$ ;  $R_1 = H, Me$ ;  $R_2 = H, cyano, NO_2, Me, Ph, etc.$ ;  $R_3 = H, Me, Ph$ ;  $R_2R_3 = (CH_2)_2$ ] and II ( $m = 1, 2$ ;  $R_4 = H, Me$ ) were prepared. Many of the compds. possessed vasodilatory activity when injected locally into the femoral artery of dogs. The most potent compound, II ( $m = 2, R_4 = H$ ), was comparable to diltiazem, which is used clin. as a vasodilator.

L32 ANSWER 22 OF 22 CASREACT COPYRIGHT 2005 ACS on STN

RX(2) OF 3 ...2 B + C ==&gt; D





D

RX(2) RCT B 15760-26-6, C 124-09-4  
PRO D 15894-70-9

AN 93:7877 CASREACT

TI 1,6-Bis[5-(4-chlorophenyl)biguanido]-hexane

IN Reiter, Jozsef; Farkas, Lajos; Kasztreiner, Endre; Balogh, Tibor;  
Borvendeg, Janos; Somogyi, Tibor; Toldy, Lajos; Eggenhofer, Mrs. Tamas;  
Koritsanszky, H. Klara; et al.

PA Gyogyszerkutato Intezet, Hung.

SO Hung. Teljes, 20 pp.

CODEN: HUXXBU

DT Patent

LA Hungarian

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	HU 17484	O	19791228	HU 1976-GO1347	19760707
	HU 175371	P	19800728		
PRAI	HU 1976-GO1347		19760707		

AB The title compound p-ClC6H4NHC(:NH)NHC(:NH)NH(CH2)6NHC(:NH)NHC(:NH)NHC6H4Cl-p (I) was prepared from NCN:C(SMe)2 (II) through NCN:C(NH2)SMe and NCNHC(:NH)NH(CH2)6NHC(:NH)NHCN without isolation of any intermediate. Thus, II in DMF was stirred with NH4OH 30 min at 40°, the mixture was stirred 30 min at 50-200 Hg mm pressure, refluxed 5 h with H2N(CH2)6NH2, and refluxed 2 h with p-ClC6H4NH2.HCl at pH 1 (HCl) to give 66.6% I-2HCl.

=> => FILE HCAPLU

FILE 'HCAPLUS' ENTERED AT 16:29:20 ON 17 NOV 2005

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FILE LAST UPDATED: 16 Nov 2005 (20051116/ED)

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=> D QUE

L21 1 SEA FILE=REGISTRY ABB=ON DICYNODIAMIDE/CN  
L23 1 SEA FILE=REGISTRY ABB=ON ETHYLENEDIAMINE/CN  
L26 STR

RRT

RRT

H2N—Ak—NH2 N~~C~~NH^CN  
1 2 3 7 4 5 6

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE

L28 22 SEA FILE=CASREACT SSS FUL L26 ( 79 REACTIONS)  
L30 0 SEA FILE=CASREACT ABB=ON L28 AND 50-00-0/NPRO  
L31 0 SEA FILE=CASREACT ABB=ON L28 AND 50-00-0/RRT  
L32 22 SEA FILE=CASREACT ABB=ON L28 OR L30 OR L31  
L33 1 SEA FILE=REGISTRY ABB=ON 50-00-0  
L34 828 SEA FILE=HCAPLUS ABB=ON L21/D  
L35 5975 SEA FILE=HCAPLUS ABB=ON L23/D  
L36 6561 SEA FILE=HCAPLUS ABB=ON L33/D  
L39 8 SEA FILE=HCAPLUS ABB=ON L34 AND L35 AND L36  
L40 22 SEA FILE=HCAPLUS ABB=ON L32  
L41 8 SEA FILE=HCAPLUS ABB=ON (L39 OR L40) NOT L40  
L42 6841 SEA FILE=HCAPLUS ABB=ON L21  
L43 26544 SEA FILE=HCAPLUS ABB=ON L23  
L44 68859 SEA FILE=HCAPLUS ABB=ON L33  
L45 21 SEA FILE=HCAPLUS ABB=ON L42 AND L43 AND L44  
L46 0 SEA FILE=HCAPLUS ABB=ON L45 AND DETERGENT?/SC,SX  
L47 140 SEA FILE=HCAPLUS ABB=ON (L34 OR DICYNODIAMID? OR DICYN!DIAMI  
D? OR DICYNAMID?) (6A) (L43 OR DIAMIN? OR AMINE#)  
L48 2 SEA FILE=HCAPLUS ABB=ON L47 AND DETERGENT?/SC,SX  
L50 20 SEA FILE=HCAPLUS ABB=ON L47 AND (FORMALDEHYDE OR L44)  
L51 7 SEA FILE=HCAPLUS ABB=ON L50 AND (DETERGENT?/SC,SX OR TEXTILE?/  
SC,SX)  
L52 3 SEA FILE=HCAPLUS ABB=ON L50 AND DYE? (2A) FIX?  
L53 21 SEA FILE=HCAPLUS ABB=ON L45 NOT L40  
L54 0 SEA FILE=HCAPLUS ABB=ON L53 AND DYE? (2A) FIX?  
L55 2 SEA FILE=HCAPLUS ABB=ON L53 AND TEXTIL?/SC,SX  
L56 17 SEA FILE=HCAPLUS ABB=ON L41 OR L46 OR L48 OR L51 OR L52 OR  
L54 OR L55  
L57 0 SEA FILE=HCAPLUS ABB=ON (L45 OR L47) AND COLOR? (2A) FIX?  
L58 0 SEA FILE=HCAPLUS ABB=ON (L45 OR L47) AND COLOR? (2A) TRANSFER?  
L59 17 SEA FILE=HCAPLUS ABB=ON L56 OR L57 OR L58

=> => D QUE

L21 1 SEA FILE=REGISTRY ABB=ON DICYNODIAMIDE/CN  
L23 1 SEA FILE=REGISTRY ABB=ON ETHYLENEDIAMINE/CN  
L26 STR

RRT

RRT

H2N—Ak—NH2  
1 2 3N~~C~~NH^CN  
7 4 5 6*CA  
search*

## NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 7

## STEREO ATTRIBUTES: NONE

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L30 0 SEA FILE=CASREACT ABB=ON L28 AND 50-00-0/NPRO  
L31 0 SEA FILE=CASREACT ABB=ON L28 AND 50-00-0/RRT  
L32 22 SEA FILE=CASREACT ABB=ON L28 OR L30 OR L31  
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L34 828 SEA FILE=HCAPLUS ABB=ON L21/D  
L35 5975 SEA FILE=HCAPLUS ABB=ON L23/D  
L36 6561 SEA FILE=HCAPLUS ABB=ON L33/D  
L39 8 SEA FILE=HCAPLUS ABB=ON L34 AND L35 AND L36  
L40 22 SEA FILE=HCAPLUS ABB=ON L32  
L41 8 SEA FILE=HCAPLUS ABB=ON (L39 OR L40) NOT L40  
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L43 26544 SEA FILE=HCAPLUS ABB=ON L23  
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SC,SX)  
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L54 OR L55  
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L59 17 SEA FILE=HCAPLUS ABB=ON L56 OR L57 OR L58  
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L63 3 SEA FILE=HCAPLUS ABB=ON L61 AND TEXTIL?/SC,SX  
L64 20 SEA FILE=HCAPLUS ABB=ON L59 OR L63

=&gt; D L64 BIB ABS IND HITSTR 1-20

L64 ANSWER 1 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2000:493162 HCAPLUS

DN 133:106615

TI Laundry article which attracts soil and dyes

IN Foster, Alvie L.; Weidner, Ivonne C.; Klein, Rodrigues A.; Carrier, Allen

*20 CA references using text or  
registry numbers for the starting  
materials*

M.  
 PA National Starch and Chemical Investment Holding Corporation, USA  
 SO Eur. Pat. Appl., 15 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1020513	A2	20000719	EP 1999-118997	19990927
	EP 1020513	A3	20010207		
	EP 1020513	B1	20021211		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	US 6228783	B1	20010508	US 1998-223942	<u>19981231</u>
	AU 9953991	A1	20000706	AU 1999-53991	19991013
	AU 764283	B2	20030814		
	CA 2292245	AA	20000630	CA 1999-2292245	19991214
	JP 2000230193	A2	20000822	JP 1999-358365	19991217
PRAI	US 1998-223942	A	19981231		

AB A laundry article effective for inhibiting transfer of extraneous dyes and soil to articles in a wash liquor, said laundry article comprising a support matrix and a functionalized polyamine attached to or entrapped in the support matrix. The functionalized polyamine comprises the reaction product of (A) a cyano- or guanidino-containing compound and (B) a polyamine prepared from at least one monomeric amine. The laundry article inhibits dye transfer, soil redeposition, and provides color protection to fabrics in a wash liquor. In addition, the laundry article does not interfere with the removal of stains from fabrics washed in the presence of the laundry article. Furthermore, the laundry article containing the functionalized polyamines are economical and environmentally safe.

IC ICM C11D003-37

ICS C11D003-26; C11D017-04

CC 46-5 (Surface Active Agents and **Detergents**)

ST functionalized polyamine laundry additive; dye soil attractant laundry additive

IT Fibers

RL: TEM (Technical or engineered material use); USES (Uses)  
 (cellulosic, reaction products with functionalized polyamines; laundry article which attracts soil and dyes)

IT Polyamines

RL: IMF (Industrial manufacture); PREP (Preparation)  
 (functionalized; laundry article which attracts soil and dyes)

IT Cellulose pulp

Cotton  
 (reaction products with functionalized polyamines; laundry article which attracts soil and dyes)

IT Zeolites (synthetic), uses

RL: TEM (Technical or engineered material use); USES (Uses)  
 (reaction products with functionalized polyamines; laundry article which attracts soil and dyes)

IT 9005-25-8D, Starch, reaction products with functionalized polyamines, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
 (Absorbo HP; laundry article which attracts soil and dyes)

IT 50-00-0P, **Formaldehyde**, uses 15438-70-7P,

Diethylolurea 32289-58-0P, VANTOCIL IB

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (laundry article which attracts soil and dyes)

IT 1934-75-4D, Sodium dicyan-amide, reaction products with polyhexamethylene

diamine 30600-72-7D, Polyhexamethylene diamine, reaction  
products with sodium dicyanamide

RL: TEM (Technical or engineered material use); USES (Uses)  
(laundry article which attracts soil and dyes)

IT 50-00-0P, Formaldehyde, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)

(laundry article which attracts soil and dyes)

RN 50-00-0 HCAPLUS

CN Formaldehyde (8CI, 9CI) (CA INDEX NAME)

H<sub>2</sub>C=O

L64 ANSWER 2 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1999:795926 HCAPLUS

DN 132:37284

TI Use of basic polycondensates as antimicrobial active substance for  
detergents, textiles, and paper

IN Kuratli, Rolf; Schmidlin, Anita; Kaufmann, Werner; Ochs, Dietmar;  
Puchtler, Karin

PA Ciba Specialty Chemicals Holding Inc., Switz.

SO PCT Int. Appl., 39 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9964550	A1	19991216	WO 1999-EP3752	19990531
	W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	AU 9943720	A1	19991230	AU 1999-43720	19990531
PRAI	EP 1998-810532	A	19980611		
	WO 1999-EP3752	W	19990531		

AB Basic polycondensates are obtained by reaction of (a) an amine R1R2NANR3R4 (R1-4 = H, or alkyl which is unsubstituted or substituted by amino, hydroxy, cyano or C1-4 alkoxy, and A = alkylene which is unsubstituted or substituted or which may be interrupted by heteroatom), with an ammonium salt in the presence of a nonaq. solvent, and (b) reacting the protonated product (a) with a cyanamide at elevated temperature, for the antimicrobial treatment of the human skin, of textile fiber materials, paper or card-board and hard surfaces. An example dishwashing detergent contained basic polycondensate of NH<sub>4</sub>Cl, diethylenetriamine, and dicyandiamide 0.01-10, Na lauryl sulfate 7.0, Na myreth sulfate 7.0, lauryl glucoside 4.0, cocobetaine 1.1, EtOH 5.0, NaCl 1.0, citric acid, perfume, and water.

IC ICM C11D003-00

ICS A01N047-44; A01N033-12; A61K031-785

CC 46-5 (Surface Active Agents and **Detergents**)

Section cross-reference(s): 40, 43

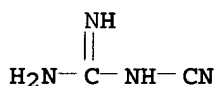
ST antimicrobial agent detergent textile paper

IT Antimicrobial agents  
 Detergents  
 Disinfectants  
 Paper  
 Paperboard  
 Softening agents  
 Textiles  
 (use of basic polycondensates as antimicrobial active substance for detergents, textiles, and paper)

IT 56-18-8DP, Bis-3-(aminopropyl)amine, reaction product with ammonium salt, condensate with dicyandiamide 111-40-0DP, Diethylenetriamine, reaction product with ammonium salt, condensate with dicyandiamide 111-86-4DP, Octylamine, reaction product with ammonium salt, condensate with dicyandiamide 143-23-7DP, Bis(6-aminoethyl)amine, reaction product with ammonium salt, condensate with dicyandiamide 461-58-5DP, Dicyandiamide, condensate with amine-ammonium salt adduct 12125-02-9DP, Ammonium chloride (NH<sub>4</sub>Cl), reaction product with amine, condensate with dicyandiamide 15520-10-2DP, 1,5-Diamino-2-methylpentane, reaction product with ammonium salt, condensate with dicyandiamide  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); IMF (Industrial manufacture); MOA (Modifier or additive use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (basic polycondensates as antimicrobial active substance for detergents, textiles, and paper)

IT 461-58-5DP, Dicyandiamide, condensate with amine-ammonium salt adduct  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); IMF (Industrial manufacture); MOA (Modifier or additive use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (basic polycondensates as antimicrobial active substance for detergents, textiles, and paper)

RN 461-58-5 HCAPLUS  
 CN Guanidine, cyano- (8CI, 9CI) (CA INDEX NAME)



RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 3 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1997:48838 HCAPLUS

DN 126:90676

TI Basic dyeing of cellulosic fibers with a diazo dye

IN Jaeger, Horst; Hoppe, Manfred; Wolff, Joachim

PA Bayer A.-G., Germany

SO Ger. Offen., 4 pp.

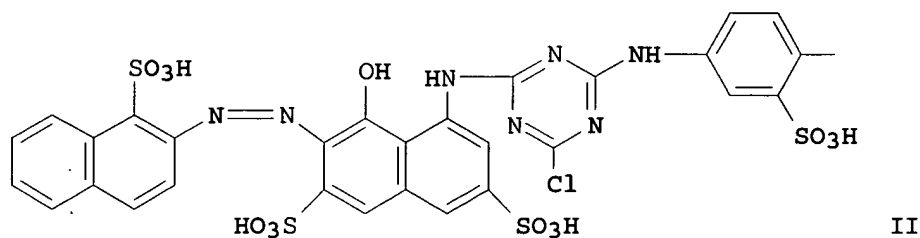
CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19521035	A1	19961212	DE 1995-19521035	19950609
PRAI	DE 1995-19521035		19950609		
GI					



AB The dye RCH:CHR (I; R = II) gives good results in dyeing hydroxy group-containing fibers, such as cellulosic fibers, in aqueous medium in the presence of a salt at pH 5-9 and temperature 60-130°. The dyed material is then fixated with (a) reaction products of functionalized amines with cyanamide, dicyandiamide, guanidine, or biguanidine; or with reaction product of ammonia with cyanamide or dicyandiamide (the reaction products contain in all cases reactive H atoms bonded to the N atom), (b) quaternary polyalkylene-polyamines, or (c) N-methylol derivs. of urea, melamine, guanamine, triazinone, uron, or a carbamate or acid amide, eventually in the presence of crosslinking catalysts. Thus, 0.1 parts I was dissolved in 200 parts demineralized water and the solution was heated to 40-50°. Cotton fabric (10 parts) was then added and the system was heated for 30 min till the temperature reached 90°. Calcined Glauber salt (3 parts) was then added, and dyeing continued at pH 7 at 90° for 35 min. The dyed cotton fabric was subsequently treated with a fixation solution prepared at 110° by condensation of 103 parts diethylenetriamine with 84 parts dicyandiamide; fixation proceeded at 70° for 3 h. The obtained bright red fabric exhibited excellent laundering stability.

IC ICM D06P003-66

ICS D06P001-382; D06P003-85; D06P003-87; D06P005-06; D06P005-08

ICA C09B056-04; C09B067-24; C09B062-09

CC 40-6 (Textiles and Fibers)

Section cross-reference(s): 41

ST diazo dye cellulosic fiber dyeing; cotton fabric dyeing diazo dye; textile dyeing diazo dye

IT Dyeing

(basic; basic dyeing of cellulosic fibers with a diazo dye)

IT Textiles

(cellulosic; basic dyeing of cellulosic fibers with a diazo dye)

IT Textiles

(cotton; basic dyeing of cellulosic fibers with a diazo dye)

IT Aminoplasts

RL: TEM (Technical or engineered material use); USES (Uses)

(fixation agent; basic dyeing of cellulosic fibers with a diazo dye in presence of)

IT Polyamines

RL: TEM (Technical or engineered material use); USES (Uses)

(polyalkylene-, quaternary, fixation agent; basic dyeing of cellulosic fibers with a diazo dye)

IT 63333-63-1D, Triazinone, reaction products with formaldehyde

RL: TEM (Technical or engineered material use); USES (Uses)

(Triazinone, fixation agent; basic dyeing of cellulosic fibers with a diazo dye in presence of)

IT 94022-69-2

RL: TEM (Technical or engineered material use); USES (Uses)

(dye; basic dyeing of cellulosic fibers with a diazo dye)

IT 50-00-0D, **Formaldehyde**, reaction products with triazinone, uses 111-40-0D, Diethylenetriamine, reaction products nitrogen-containing compds. 113-00-8D, Guanidine, reaction products with amines 420-04-2D, Cyanamide, reaction products with amines **461-58-5D**, Dicyandiamide, reaction products with **amines** 1854-26-8, Dimethyloldihydroxyethyleneurea 6882-47-9D, Biguanidine, reaction products with amines 7664-41-7D, Ammonia, reaction products nitrogen-containing compds., uses 9003-08-1, **Formaldehyde-melamine** copolymer 9011-05-6, **Formaldehyde-urea** copolymer 25988-97-0, Dimethylamine-epichlorohydrin copolymer 30394-92-4, **Formaldehyde-uron** copolymer 50887-28-0, **Formaldehyde-guanamine** copolymer

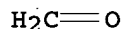
RL: TEM (Technical or engineered material use); USES (Uses)  
(**fixation** agent; basic **dyeing** of cellulosic fibers with a diazo dye in presence of)

IT 50-00-0D, **Formaldehyde**, reaction products with triazinone, uses **461-58-5D**, Dicyandiamide, reaction products with **amines**

RL: TEM (Technical or engineered material use); USES (Uses)  
(**fixation** agent; basic **dyeing** of cellulosic fibers with a diazo dye in presence of)

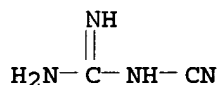
RN 50-00-0 HCAPLUS

CN Formaldehyde (8CI, 9CI) (CA INDEX NAME)



RN 461-58-5 HCAPLUS

CN Guanidine, cyano- (8CI, 9CI) (CA INDEX NAME)



L64 ANSWER 4 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1994:11774 HCAPLUS

DN 120:11774

TI Manufacture of metal-heterocarbon-nitrogen catalyst for electrochemical-cell and especially fuel-cell electrodes

IN Witherspoon, Romeo R.

PA General Motors Corp., USA

SO U.S., 13 pp.

CODEN: USXXAM

DT Patent

LA English

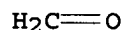
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5240893	A	19930831	US 1992-894696	19920605
	US 5372981	A	19941213	US 1993-44688	19930412
PRAI	US 1992-894696	A3	19920605		

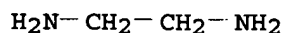
AB Substrates of catalyzed C particles are prepared by 1st reacting an amine compound with HCOH and/or polymerized HCHO in solution, in the presence of a catalyst, C particles, and a metal (Co, Ni, Fe, Cu, V, Cr, and/or Mn) salt at .apprx.50-100° and at a sufficient stirring rate to provide a polymerized product in the form of a gel. The gel is heated, pyrolyzed in an

inert atmospheric at .apprx.600-1000° for a sufficient time to form a metal-N-heterocarbon complex supported on internal and external surfaces of the C particles. The powder is mixed with a binder, and electrodes are pressed and formed into a suitably shaped substrate of catalytic C.

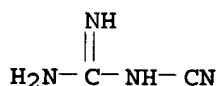
IC ICM H01M004-88  
ICS H01M004-96; B01J021-18; B01J023-70  
INCL 502101000  
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)  
Section cross-reference(s): 67  
ST fuel cell catalytic electrode; metal heterocarbon nitrogen catalytic electrode  
IT Electrodes  
(fuel-cell, catalytic, metal-heterocarbon-nitrogen, manufacture of)  
IT 50-00-0D, Formaldehyde, reaction products with amines, uses  
57-13-6D, Urea, reaction products with formaldehyde or polymerized formaldehyde, uses 107-15-3D, 1,2-Ethanediamine, reaction products with formaldehyde or polymerized formaldehyde, uses 108-45-2, 1,3-Benzenediamine, uses 108-78-1D, 1,3,5-Triazine-2,4,6-triamine, reaction products with formaldehyde or polymerized formaldehyde, uses 112-24-3D, Triethylenetetramine, reaction products with formaldehyde or polymerized formaldehyde 461-58-5D, Dicyandiamide, reaction products with formaldehyde or polymerized formaldehyde 7439-89-6D, Iron, salts, uses 7439-96-5D, Manganese, salts, uses 7440-02-0D, Nickel, salts, uses 7440-47-3D, Chromium, salts, uses 7440-48-4D, Cobalt, salts, uses 7440-50-8D, Copper, salts, uses 7440-62-2D, Vanadium, salts, uses 9002-81-7D, Poly(oxymethylene), reaction products with amines  
RL: USES (Uses)  
(in manufacture of metal-heterocarbon-nitrogen catalysts, for fuel-cell electrodes)  
IT 50-00-0D, Formaldehyde, reaction products with amines, uses 107-15-3D, 1,2-Ethanediamine, reaction products with formaldehyde or polymerized formaldehyde, uses 461-58-5D, Dicyandiamide, reaction products with formaldehyde or polymerized formaldehyde  
RL: USES (Uses)  
(in manufacture of metal-heterocarbon-nitrogen catalysts, for fuel-cell electrodes)  
RN 50-00-0 HCAPLUS  
CN Formaldehyde (8CI, 9CI) (CA INDEX NAME)



RN 107-15-3 HCAPLUS  
CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)

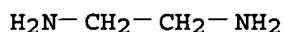


RN 461-58-5 HCAPLUS  
CN Guanidine, cyano- (8CI, 9CI) (CA INDEX NAME)

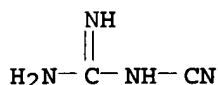




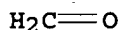
L64 ANSWER 5 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 1993:562284 HCAPLUS  
DN 119:162284  
TI Novel formaldehyde scavengers in resin finishing of cotton fabrics  
AU Bhattacharyya, N.; Doshi, B. A.; Sahasrabudhe, A. S.; Mistry, P. R.  
CS Bombay Text. Res. Assoc., Bombay, India  
SO American Dyestuff Reporter (1993), 82(3), 96-100, 103  
CODEN: ADREAI; ISSN: 0002-8266  
DT Journal  
LA English  
AB The release of HCHO from dyed finished fabrics depends not only on the pH, catalyst, and curing conditions, but also on the structure of the dye present and the chemical nature of additives. Substances containing amine groups reduce HCHO release considerably. Interactions of the scavenger mol. with various groups of the dye chromophore affect the color characteristics of the finished fabric.  
CC 40-9 (Textiles and Fibers)  
ST formaldehyde scavenger finishing cotton fabric  
IT Shellac  
RL: USES (Uses)  
(formaldehyde scavengers for finished dyed cotton fabrics, resilience and washfastness in relation to)  
IT Textiles  
(cotton, dyed, formaldehyde scavengers for resin finishing of, resilience and washfastness in relation to)  
IT Textiles  
(poplin, formaldehyde scavengers for resin finishing of dyed, resilience and washfastness in relation to)  
IT 2429-82-5, C.I. Direct Brown 2 2610-05-1, C.I. Direct Blue 1  
2610-11-9, C.I. Direct Red 81 12222-37-6, C.I. Direct Orange 34  
12239-45-1, C.I. Reactive Violet 1 70616-90-9, C.I. Reactive Orange 4  
71872-74-7, C.I. Reactive Blue 140 89998-31-2, Indosol Blue SF GL  
137012-22-7, Indosol Rubinole SF-R  
RL: USES (Uses)  
(colorfastness of cotton and poplin textiles dyed with, formaldehyde scavenger treatment in relation to)  
IT 1854-26-8, DMDHEU  
RL: USES (Uses)  
(cotton textile finishing by, formaldehyde removal from, resilience and washfastness in relation to)  
IT 50-01-1, Guanidine hydrochloride 57-13-6, Urea, uses 77-92-9, Citric acid, uses 105-60-2, Caprolactam, uses 107-15-3, Ethylenediamine, uses 107-22-2, Glyoxal 461-58-5, Dicyandiamide 637-39-8, Triethanolamine hydrochloride 9012-76-4, Chitosan 85087-37-2, Indosol E50  
RL: USES (Uses)  
(formaldehyde scavengers for finished dyed cotton fabrics, resilience and washfastness in relation to)  
IT 50-00-0, Formaldehyde, uses  
RL: REM (Removal or disposal); PROC (Process)  
(removal of, from finished dyed cotton fabrics, agents for, resilience and washfastness in relation to)  
IT 107-15-3, Ethylenediamine, uses 461-58-5, Dicyandiamide  
RL: USES (Uses)  
(formaldehyde scavengers for finished dyed cotton fabrics, resilience and washfastness in relation to)  
RN 107-15-3 HCAPLUS  
CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)



RN 461-58-5 HCAPLUS  
CN Guanidine, cyano- (8CI, 9CI) (CA INDEX NAME)



IT 50-00-0, Formaldehyde, uses  
RL: REM (Removal or disposal); PROC (Process)  
(removal of, from finished dyed cotton fabrics, agents for, resilience  
and washfastness in relation to)  
RN 50-00-0 HCAPLUS  
CN Formaldehyde (8CI, 9CI) (CA INDEX NAME)



L64 ANSWER 6 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1987:646758 HCAPLUS

DN 107:246758

TI Processing holograms

IN Long, William Edward; Butcher, David Walter

PA Ciba-Geigy A.-G., Switz.

SO Eur. Pat. Appl., 25 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 225852	A2	19870616	EP 1986-810567	19861205
	EP 225852	A3	19890809		
	EP 225852	B1	19910814		
	R: BE, CH, DE, FR, GB, IT, LI, SE				
	CA 1279779	A1	19910205	CA 1986-524211	19861201
	US 4788115	A	19881129	US 1986-940047	19861210
	JP 62157084	A2	19870713	JP 1986-293587	19861211
PRAI	GB 1985-30454	A	19851211		

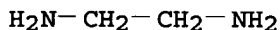
AB A hologram which uses gelatin as the binder is prepared by exposing a holog. material to a coherent light source, developing the holog. image by a chemical or phys. process, and treating the material before, during, or after development with a solution of a gelatin reactive compound which has a mol. weight >200 and reacts with the gelatin to form covalent bonds and thus to increase the mol. bulk of the gelatin. Thus, a transparent photog. film support was coated with a AgBr-gelatin holog. emulsion sensitized to 630 nm, exposed by a Denisyuk method to a He-Ne laser using a brushed Al plate as the object, developed in a solution containing Na2SO3, hydroquinone, and Na2CO3, bleached in a solution containing Fe(NH4)EDTA and KBr, washed, and treated with an aqueous solution containing a reaction product of HCHO, NH4Cl, ethylenediamine, and dicyandiamide to give a hologram with a bathochromic shift of 64.7 nm compared to a control without the treatment by the reaction product.

IC ICM G03C005-26

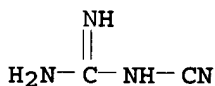
ICS G03C005-39; G03C005-30; G03C005-44; G03H001-18  
CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
ST holog processing gelatin reactive compd; aldehyde compd processing gelatin  
hologram  
IT Holography  
(gelatin holograms treated with aldehyde compds. for volume enhancement  
in)  
IT Aldehydes, uses and miscellaneous  
RL: USES (Uses)  
(gelatin holograms treated with, for volume enhancement)  
IT Gelatins, uses and miscellaneous  
RL: USES (Uses)  
(holograms, treated with aldehyde compds. for volume enhancement)  
IT Quaternary ammonium compounds, uses and miscellaneous  
RL: USES (Uses)  
(C11-19-alkyl(3-chloro-2-hydroxypropyl)dimethyl, chlorides, gelatin  
holograms treated with, for volume enhancement)  
IT 50-00-0D, Formaldehyde, reaction products with ammonium chloride  
and dicyandiamide and ethylenediamine 107-15-3D,  
Ethylenediamine, reaction products with formaldehyde and ammonium chloride  
and dicyandiamide 111-40-0D, Diethylenetriamine, reaction products with  
dicyandiamide 461-58-5D, Dicyandiamide, reaction products with  
formaldehyde and ammonium chloride and ethylenediamine 12125-02-9D,  
Ammonium chloride, reaction products with formaldehyde and dicyandiamide  
and ethylenediamine 33025-13-7 43031-74-9 50744-78-0 52333-29-6  
67027-21-8 98211-23-5 111360-57-7 111366-47-3  
RL: USES (Uses)  
(gelatin holograms treated with, for volume enhancement)  
IT 50-00-0D, Formaldehyde, reaction products with ammonium chloride  
and dicyandiamide and ethylenediamine 107-15-3D,  
Ethylenediamine, reaction products with formaldehyde and ammonium chloride  
and dicyandiamide 461-58-5D, Dicyandiamide, reaction products  
with formaldehyde and ammonium chloride and ethylenediamine  
RL: USES (Uses)  
(gelatin holograms treated with, for volume enhancement)  
RN 50-00-0 HCAPLUS  
CN Formaldehyde (8CI, 9CI) (CA INDEX NAME)



RN 107-15-3 HCAPLUS  
CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)

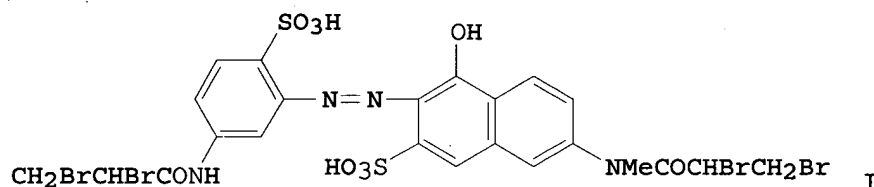


RN 461-58-5 HCAPLUS  
CN Guanidine, cyano- (8CI, 9CI) (CA INDEX NAME)



L64 ANSWER 7 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1987:646757 HCAPLUS  
 DN 107:246757  
 TI Holograms  
 IN Doyle, James; Butcher, David Walter; Clark, John Andrew  
 PA Ciba-Geigy A.-G., Switz.  
 SO Eur. Pat. Appl., 12 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 225853	A2	19870616	EP 1986-810570	19861205
	EP 225853	A3	19890809		
	EP 225853	B1	19910814		
	R: BE, CH, DE, FR, GB, IT, LI, SE				
	CA 1279780	A1	19910205	CA 1986-524213	19861201
	US 4816360	A	19890328	US 1986-940050	19861210
	JP 62156687	A2	19870711	JP 1986-293585	19861211
PRAI	GB 1985-30459	A	19851211		
GI					



AB A multicolored hologram which uses gelatin as the binder having interference fringes lying in layers parallel to the substrate and whose colors are visible by reflection in incident natural light is prepared by applying to the selected areas of a processed gelatin hologram containing interference fringes a compound which causes the interference fringes to sep. permanently and produce a bathochromic shift in the replay wavelength. The gelatin reactive compound is an onium compound containing  $\geq 1$  C10-18alkyl or a quaternary ammonium compound having the general formula  $N^+RR_1R_2R_3X^-$  (R = C10-18 alkyl; R1, R2 = C1-2 alkyl; R3 = C1-2 alkyl, aralkyl, cycloalkyl, ZNR4R5 where Z = alkylene; R4, R5 = C1-2 alkyl, R1R2R3 may represent the atoms necessary to complete a heterocyclic aromatic ring group; X- = anion). The hologram is of particular use in identification and security cards. Thus, a transparent photog. film support was coated with a AgBr-gelatin emulsion sensitized to 633 nm, exposed to a He-Ne laser by the Denisyuk exposure method using a brushed Al plate as an object, developed in a solution containing Na2SO3, hydroquinone, and Na2CO3, bleached in a solution containing Fe(NH4)EDTA and KBr, washed, dried, a portion of the resultant gelatin hologram contacted with a solution containing orange dye I, and dried to give a hologram in which the portion contacted with the dye solution was visible in ordinary ambient light.

IC ICM G03C011-18  
 ICS G03C005-48; G03H001-18

CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST multicolor hologram gelatin identification card

IT Gelatins, uses and miscellaneous

RL: USES (Uses)

(holograms, treated with onium or quaternary ammonium compds. for production of multicolored holograms)

IT Holography

(multicolored hologram production in, from gelatin holograms treated with onium or quaternary ammonium compds.)

IT Cards

(identification, with multicolored holograms)

IT 50-00-0D, Formaldehyde, reaction products with ammonium chloride and dicyandiamide and ethylenediamine 107-15-3D, Ethylenediamine, reaction products with ammonium chloride and dicyandiamide and formaldehyde 461-58-5D, Dicyandiamide, reaction products with ammonium chloride and ethylenediamine and formaldehyde 12125-02-9D, Ammonium chloride, reaction products with dicyandiamide and ethylenediamine and formaldehyde 25154-86-3, Poly(dimethylaminoethyl methacrylate) 50744-87-1 111360-57-7

RL: USES (Uses)

(gelatin holograms treated with, for production of multicolored holograms)

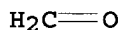
IT 50-00-0D, Formaldehyde, reaction products with ammonium chloride and dicyandiamide and ethylenediamine 107-15-3D, Ethylenediamine, reaction products with ammonium chloride and dicyandiamide and formaldehyde 461-58-5D, Dicyandiamide, reaction products with ammonium chloride and ethylenediamine and formaldehyde

RL: USES (Uses)

(gelatin holograms treated with, for production of multicolored holograms)

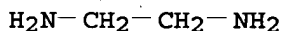
RN 50-00-0 HCAPLUS

CN Formaldehyde (8CI, 9CI) (CA INDEX NAME)



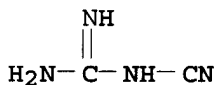
RN 107-15-3 HCAPLUS

CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)



RN 461-58-5 HCAPLUS

CN Guanidine, cyano- (8CI, 9CI) (CA INDEX NAME)



L64 ANSWER 8 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1984:512365 HCAPLUS

DN 101:112365

TI Uniform dyeing of meshware of cellulose fibers in hose form with water-insoluble azo dyes produced on the fibers

IN Jeths, Johannes

PA Hoechst A.-G. , Fed. Rep. Ger.

SO Ger. Offen., 13 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3242155	A1	<u>19840517</u>	DE 1982-3242155	19821113
	EP 109609	A1	19840530	EP 1983-111166	19831109

R: AT, BE, CH, DE, FR, IT, LI, NL

PRAI DE 1982-3242155 A 19821113

AB Tubular cellulosic knits are azoically dyed fast shades by pretreating the knit, before impregnating with the coupling component, with a cationic compound based on a dicyandiamide-formaldehyde condensate and a combination wetting agent containing a Na alkyl sulfonate and a condensate [9043-30-5] of 1 mol isotridecanol with 8 mol ethylene oxide, rinsing, and dyeing with components to form azo dyes. Thus, a cotton knit was treated with a bath containing 5 g/L of a condensation product from ethylenediamine sulfate 1, dicyandiamide 2, and formaldehyde 4.7 mol and 2 g/L of a 25% aqueous solution of sodium alkyl sulfonate containing 10% of isotridecanol-ethylene oxide condensate and rinsed. The textile was impregnated with a composition containing C.I. Azoic Coupling Component 28, rinsed, and treated with C.I. Azoic Diazo Component 3 to give a level dyeing without any fold faults.

IC D06P003-68

CC 40-6 (Textiles)

ST azoic dyeing cotton pretreatment; knit cotton dyeing level; wetting agent dyeing azoic dye; formaldehyde dicyandiamide condensate azoic dye

IT Wetting agents

(in azoic dyeing with improved levelness)

IT Dyeing

(azoic, of tubular cotton knits, with improved levelness, pretreatment for)

IT 50-00-0D, reaction products with dicyandiamide and ethylenediamine sulfate  
**461-58-5D**, reaction products with **ethylenediamine**  
 sulfate and **formaldehyde** 9043-30-5 12125-02-9D, reaction  
 products with dicyandiamide and formaldehyde 25723-52-8D, reaction  
 products with dicyandiamide and formaldehyde

RL: USES (Uses)

(pretreatment of cotton knits by, for improved levelness of azoic dyeing)

IT **461-58-5D**, reaction products with **ethylenediamine**  
 sulfate and **formaldehyde**

RL: USES (Uses)

(pretreatment of cotton knits by, for improved levelness of azoic dyeing)

RN 461-58-5 HCAPLUS

CN Guanidine, cyano- (8CI, 9CI) (CA INDEX NAME)

NH

H<sub>2</sub>N-C-NH-CN

L64 ANSWER 9 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1984:176401 HCAPLUS  
 DN 100:176401  
 TI Finish for dyed fabric blends  
 IN Kissling, Bruno; Robinson, Tibor; Schwer, Dieter  
 PA Sandoz-Patent-G.m.b.H., Fed. Rep. Ger.  
 SO Ger. Offen., 14 pp.  
 CODEN: GWXXBX

DT Patent  
LA German  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3326952	A1	19840209	DE 1983-3326952	19830727
	BE 897458	A1	19840203	BE 1983-211297	19830803
	FR 2531463	A1	19840210	FR 1983-12825	19830803
	FR 2531463	B1	19860912		
	GB 2125834	A1	19840314	GB 1983-20876	19830803
	GB 2125834	B2	19860122		
PRAI	DE 1982-3229170	A1	19820805		

AB Fabrics from polyamide-hydroxylated fiber blends are dyed or printed with anionic dyes and fluorescent brighteners and treated with polyamines or their reaction product with HCHO or HCHO donors in the presence of catalysts. Thus, a 103:84 mixture of diethylenetriamine and dicyandiamide was condensed, neutralized with H<sub>2</sub>SO<sub>4</sub>, spray dried, heated with aqueous MgCl<sub>2</sub> and dimethylolhydroxyethyleneurea to give a water-soluble liquid. A dyed polyamide-cotton blend (polyamide dyed with C.I. Acid Red 128) was impregnated with the above liquid containing 4% HOAc, dried, and heated at 180° for 40 s to give a textile with good wet-, wash-, and Cl-fastness.

IC D06P005-06; D06P001-39; D06L003-12

CC 40-6 (Textiles)

ST polyamide blend dyeing finishing; blend textile dyeing finishing; cotton blend dyeing finishing; diethylenetriamine adduct finishing fabric; dicyandiamide condensate finishing fabric; imidazolidinone deriv finishing fabric

IT Dyeing

(of polyamide-cotton blends, finishes for)

IT 111-40-0D, reactions products with dicyanadiamide and formaldehyde donors  
461-58-5D, reactions products with polyamines and formaldehyde donors  
1854-26-8D, reactions products with dicyanadiamide and polyamines  
13531-52-7D, reactions products with dicyanadiamide and formaldehyde donors

RL: USES (Uses)

(finishes, for dyed polyamide-cotton blends)

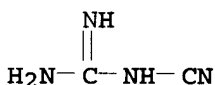
IT 461-58-5D, reactions products with polyamines and formaldehyde donors

RL: USES (Uses)

(finishes, for dyed polyamide-cotton blends)

RN 461-58-5 HCAPLUS

CN Guanidine, cyano- (8CI, 9CI) (CA INDEX NAME)



L64 ANSWER 10 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1983:407085 HCAPLUS

DN 99:7085

TI Dicyandiamide-formaldehyde condensates modified with acrylamide

IN Bankert, Ralph A.

PA Hercules Inc., USA

SO U.S., 6 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4382129	A	19830503	US 1981-328752	19811208
	FI 8203979	A	19830609	FI 1982-3979	19821119
	FI 70722	B	19860626		
	FI 70722	C	19861006		
	CA 1188833	A1	19850611	CA 1982-416571	19821129
	EP 82373	A1	19830629	EP 1982-111198	19821203
	EP 82373	B1	19851009		
	R: AT, BE, DE, FR, GB, IT, NL, SE				
	AT 16017	E	19851015	AT 1982-111198	19821203
	AU 8291170	A1	19830616	AU 1982-91170	19821207
	AU 553326	B2	19860710		
	BR 8207102	A	19831011	BR 1982-7102	19821207
	ES 517983	A1	19840116	ES 1982-517983	19821207
	JP 58104917	A2	19830622	JP 1982-214056	19821208
	JP 02061971	B4	19901221		
PRAI	US 1981-328751	A	19811208		
	US 1981-328752	A	19811208		
	US 1981-328753	A	19811208		
	US 1981-328754	A	19811208		
	EP 1982-111198	A	19821203		
AB	Reaction of adipic acid-diethylenetriamine polymer-dicyandiamide-HCHO condensates (I) with (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> , acrylamide, amines, or epichlorohydrin gave thermosetting resins as accelerators for alkylketene dimers in paper sizing. Thus, pulp was treated with 0.10% (dry basis) ketene dimer and 0.15% reaction product of (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> , acrylamide, and I, diluted with H <sub>2</sub> O to 2.55% consistency, formed into handsheets, dried to 3-5% moisture, and cured for 5 min at 105° to give paper (40 lb/3000 ft <sup>2</sup> ) with Hercules sizing degree 549 s, compared with 278 when sized with I only.				
IC	C08L061-22				
INCL	524598000				
CC	43-7 (Cellulose, Lignin, Paper, and Other Wood Products)				
	Section cross-reference(s): 37				
ST	polyamide condensate size paper; epichlorohydrin condensate size paper; acrylamide condensate size paper; ketene dimer size paper; size paper; dicyandiamide condensate size paper; formaldehyde condensate size paper; diethylenetriamine polyamide size				
IT	Sizes				
	(alkylketene dimers and polyamide condensates, for paper)				
IT	Polyamides, compounds				
	RL: USES (Uses)				
	(reaction products with dicyandiamide and formaldehyde, as sizes for paper)				
IT	Paper				
	(sizes for, alkylketene dimers and polyamide condensates as)				
IT	50-00-0D, reaction products with dicyandiamide, polyamides and acrylamide 79-06-1D, reaction products with dicyandiamide, formaldehyde and polyamides 106-89-8D, reaction products with acrylamide and hydroxymethylated polyamides 107-15-3D, reaction products with acrylamide and hydroxymethylated polyamides 461-58-5D, reaction products with formaldehyde, polyamides and acrylamide 674-82-8D, alkyl derivs. 7783-20-2D, reaction products with hydroxymethylated polyamides and acrylamide 25085-20-5D, reaction products with dicyandiamide, formaldehyde and acrylamide				
	RL: USES (Uses)				
	(sizes, for paper)				
IT	50-00-0D, reaction products with dicyandiamide, polyamides and				

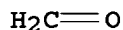


acrylamide 107-15-3D, reaction products with acrylamide and  
hydroxymethylated polyamides 461-58-5D, reaction products with  
formaldehyde, polyamides and acrylamide  
RL: USES (Uses)

(sizes, for paper)

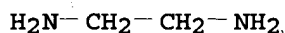
RN 50-00-0 HCAPLUS

CN Formaldehyde (8CI, 9CI) (CA INDEX NAME)



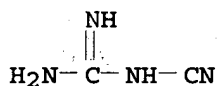
RN 107-15-3 HCAPLUS

CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)



RN 461-58-5 HCAPLUS

CN Guanidine, cyano- (8CI, 9CI) (CA INDEX NAME)



L64 ANSWER 11 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 1983:127644 HCAPLUS  
DN 98:127644  
TI Posttreatment of substrates containing hydroxy groups  
IN Runyon, James Ross; Valenti, Salvatore  
PA Sandoz A.-G., Switz.  
SO Fr. Demande, 25 pp.

CODEN: FRXXBL

DT Patent

LA French

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2505894	A1	19821119	FR 1982-8319	19820511
	FR 2505894	B1	19860110		
	CH 673195	A3	19900228	CH 1982-2733	19820504
	CH 673195	B	19900831		
	US 4439203	A	19840327	US 1982-376901	<del>19820510</del>
	GB 2099007	A	19821201	GB 1982-13564	19820511
	GB 2099007	B2	19850109		
	JP 57193584	A2	19821127	JP 1982-79262	19820513
	JP 01060110	B4	19891221		
	FR 2513279	A1	19830325	FR 1982-18648	19821104
	FR 2513279	B1	19851018		
	FR 2513278	A1	19830325	FR 1982-18649	19821104
	US 4511707	A	19850416	US 1984-573647	19840125
PRAI	DE 1981-3119115	A	19810514		
	DE 1981-3119672	A	19810518		
	DE 1981-3123664	A	19810615		
	US 1982-376901	A3	19820510		
AB	Compns. for for improving the wetfastness of dyes and fluorescent				

whiteners on OH group-containing textiles contain precondensate of reaction products of amines with cyanamide or guanidine derivs., ≤50% of which can be replaced by dicarboxylic acid derivs.; products from NH compds. and epichlorohydrin, HCHO, or urea resins; and N-methylol compds., and are crosslinked. Thus, diethylenetriamine was condensed with dicyandiamide and treated with epichlorohydrin to give a clear yellow transparent solution. A cotton textile dyed with C.I. Direct Black 117 by an exhaust process was treated 1 h with this composition and dried to give good washfastness.

IC D06M015-54; C08G012-02; C08G059-10; D06P005-08

CC 40-6 (Textiles)

ST finish wetfast dyeing textile; cyanamide condensate finish textile; epichlorohydrin condensate finish textile; amine condensate finish textile; diethylenetriamine condensate finish textile

IT Dyeing

(of cellulosic textiles, finishes for wetfastness in)

IT 7786-30-3, uses and miscellaneous

RL: CAT (Catalyst use); USES (Uses)

(catalyst, for crosslinking of finishes for textiles)

IT 50-00-0D, reaction products with dicyanadiamide and diethylenetriamine 106-89-8D, reaction products with dicyandiamide and diethylenetriamine 107-15-3D, reaction products with dicyandiamide and epichlorohydrin 111-40-0D, reaction products with dicyandiamide and epichlorohydrin 112-24-3D, reaction products with dicyanadiamide and dihydroxyethylenurea 112-57-2D, reaction products with dicyandiamide and epichlorohydrin 120-61-6D, reaction products with dicyandiamide, diethylenetriamine and epichlorohydrin 461-58-5D, reaction products with diethylenetriamine and epichlorohydrin 593-85-1D, reaction products with diethylenetriamine and epichlorohydrin 12125-02-9D, reaction products with dicyanadiamide, dihydroxyethylenurea, and formaldehyde 13531-52-7D, reaction products with dicyandiamide and epichlorohydrin

RL: USES (Uses)

(finishes, for dyed cellulosic textiles for wetfastness)

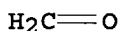
IT 50-00-0D, reaction products with dicyanadiamide and diethylenetriamine 107-15-3D, reaction products with dicyandiamide and epichlorohydrin 461-58-5D, reaction products with diethylenetriamine and epichlorohydrin

RL: USES (Uses)

(finishes, for dyed cellulosic textiles for wetfastness)

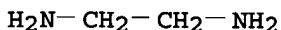
RN 50-00-0 HCAPLUS

CN Formaldehyde (8CI, 9CI) (CA INDEX NAME)



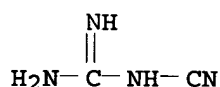
RN 107-15-3 HCAPLUS

CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)



RN 461-58-5 HCAPLUS

CN Guanidine, cyano- (8CI, 9CI) (CA INDEX NAME)



L64 ANSWER 12 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1983:108819 HCAPLUS

DN 98:108819

TI Dyeing with basic dyes

IN Moser, Helmut; Robinson, Tibor

PA Sandoz-Patent-G.m.b.H., Fed. Rep. Ger.

SO Ger. Offen., 22 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3221951	A1	19830105	DE 1982-3221951	19820611
	GB 2100760	A	19830106	GB 1982-17660	19820618
	GB 2100760	B2	19850411		
	NL 8202475	A	19830117	NL 1982-2475	19820618
	FR 2508068	A1	19821224	FR 1982-10936	19820621
	FR 2508068	B1	19850503		
	AU 8285074	A1	19830106	AU 1982-85074	19820621
	JP 58023976	A2	19830212	JP 1982-105557	19820621
	BR 8203625	A	19830614	BR 1982-3625	19820621
	ES 513322	A1	19830816	ES 1982-513322	19820621
	CA 1187654	A1	19850528	CA 1982-405574	19820621
	ZA 8204422	A	19840229	ZA 1982-4422	19820622
	US 4439208	A	19840327	US 1982-391014	19820622
PRAI	DE 1981-3124400	A1	19810622		
	DE 1981-3124472	A1	19810622		
	DE 1981-3124477	A1	19810622		

AB The light- and washfastness of OH-group containing textiles dyed with basic dyes are improved by treatment with fixing agents consisting of either precondensates or mixts. of polyalkylenepolyamine reaction products with cyanamide, dicyandiamide (I), guanidine, or biguanidine and optionally dicarboxylic acids or esters or quaternary polyalkylenepolyamines, HCHO or a HCHO-generating compound and(or) an N-methylol compound of urea, melamine, guanamine, triazinones, urons, carbamides, or carboxylic acid amides, and a crosslinking catalyst for the methylol derivs. Thus, cotton dyed with a basic dye was padded with a solution containing 100 g/L I-diethylenetriamine-dihydroxydimethylolethyleneurea reaction product and squeezed to provide a liquor take-up of .apprx.80%. The fabric was dried on a pin tenter and cured for 30-45 s at 175-180°. The dyed fabric had very good fastness to wet processing, light, and washing, as well as improved crease resistance.

IC D06P001-56; D06P005-08; D06P005-06; D06M015-54

CC 40-6 (Textiles)

ST dyeing cotton textile fixation agent; diethylenetriamine textile fixation agent; dihydroxydimethylolethyleneurea assistant dyeing cotton; dicyanamide assistant dyeing cotton

IT Dyeing

(of cellulosic textiles, with basic dyes, fixation agents for)

IT 50-00-0D, reaction products with diethylenetriamine and dicyandiamide  
 57-13-6D, methylolated, reaction products with polyamines and cyanamides  
 or guanidines 106-89-8D, reaction products with dimethylamine and

dimethyloldihydroxyethyleneurea 108-78-1D, methylolated, reaction products with polyamines and cyanamides or guanidines 108-80-5D, methylolated, reaction products with polyamines and cyanamides or guanidines 110-18-9D, reaction products with dimethyloldihydroxyethyleneurea and dichlorodiethyl ether 111-40-0D, reaction products with dicyandiamide, formaldehyde and N-methylol compds. 111-44-4D, reaction products with bis(dimethylamino)ethane and dimethyloldihydroxyethyleneurea 113-00-8D, reaction products with polyamines, formaldehyde and methylol compds. 124-40-3D, reaction products with dimethyloldihydroxyethyleneurea and epichlorohydrin 420-04-2D, reaction products with polyamines, formaldehyde and methylol compds. 461-58-5D, reaction products with **polyamines**, **formaldehyde** and N-methylol compds. 504-08-5D, reaction products with polyamines and cyanamides 542-29-0D, methylolated, reaction products with polyamines and cyanamides or guanidines 1854-26-8D, reaction products with amines, dicyandiamide, epichlorohydrin and dichlorodiethyl ether 6882-47-9D, reaction products with polyamines, formaldehyde and methylol compds.

RL: USES (Uses)

(fixation agents, for basic dyes on cellulosic textiles)

IT 461-58-5D, reaction products with **polyamines**, **formaldehyde** and N-methylol compds.

RL: USES (Uses)

(fixation agents, for basic dyes on cellulosic textiles)

RN 461-58-5 HCAPLUS

CN Guanidine, cyano- (8CI, 9CI) (CA INDEX NAME)

NH

H<sub>2</sub>N-C-NH-CN

L64 ANSWER 13 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1980:497168 HCAPLUS

DN 93:97168

TI Fireproofing of wood with inorganic ammonium salts and dicyanodiamide-formaldehyde reaction products

IN Rohringer, Peter; Wegmueller, Hans

PA Ciba-Geigy A.-G., Switz.

SO Ger. Offen., 22 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2942788	A1	19800508	DE 1979-2942788	19791023
	US 4301217	A	19811117	US 1979-85562	19791017
	GB 2033446	A	19800521	GB 1979-36726	19791023
	FI 7903313	A	19800427	FI 1979-3313	19791024
	AU 7952143	A1	19800501	AU 1979-52143	19791024
	SE 7908846	A	19800427	SE 1979-8846	19791025
	NO 7903426	A	19800429	NO 1979-3426	19791025
	BR 7906928	A	19800603	BR 1979-6928	19791025
	ZA 7905720	A	19801029	ZA 1979-5720	19791025
PRAI	CH 1978-11079	A	19781026		

AB Impregnation of wood with NH<sub>4</sub> salts containing ammonium salt-dicyandiamide(I)-formaldehyde (II) reaction products gave products with improved fire

resistance. Thus, hardwood was impregnated with an aqueous solution containing 150 g/L (NH<sub>4</sub>)<sub>2</sub>HPO<sub>4</sub> and 15.0 g/L NH<sub>4</sub>Cl-I-II reaction product at 90°, air-dried for 12 h at 20°, hardened for 5 min at 150°, air-sprayed with H<sub>2</sub>O at 2 L/min, and air-dried to give a specimen with addnl. burning time after 3 s ignition (DIN 53906) 0 s..

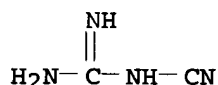
IC B27K003-52  
 CC 43-2 (Cellulose, Lignin, Paper, and Other Wood Products)  
 ST ammonium phosphate fireproofing wood; dicyandiamide formaldehyde reaction product fireproofing  
 IT Fireproofing agents  
     (ammonium salts containing dicyandiamide-formaldehyde reaction products, for wood)  
 IT Polyphosphoric acids  
 RL: USES (Uses)  
     (ammonium salts, fireproofing agents, containing dicyandiamide-formaldehyde reaction products, for wood)  
 IT Wood  
     (fireproofing of, with ammonium salts containing dicyandiamide-formaldehyde reaction products)  
 IT 50-00-0D, reaction products with ammonium salt and dicyandiamide  
 107-15-3D, reaction products with ammonium chloride, dicyandiamide and formaldehyde 333-18-6D, reaction products with dicyandiamide and formaldehyde 461-58-5D, reaction products with ammonium salt and formaldehyde 6484-52-2D, reaction products with dicyandiamide and formaldehyde 7722-76-1D, reaction products with dicyandiamide and formaldehyde 12125-02-9D, reaction products with dicyandiamide and formaldehyde  
 RL: USES (Uses)  
     (fireproofing agent, containing ammonium salts, for wood)  
 IT 7783-20-2, uses and miscellaneous 7783-28-0 13597-86-9  
 RL: USES (Uses)  
     (fireproofing agents, containing dicyandiamide-formaldehyde reaction products, for wood)  
 IT 50-00-0D, reaction products with ammonium salt and dicyandiamide  
 107-15-3D, reaction products with ammonium chloride, dicyandiamide and formaldehyde 461-58-5D, reaction products with ammonium salt and formaldehyde  
 RL: USES (Uses)  
     (fireproofing agent, containing ammonium salts, for wood)  
 RN 50-00-0 HCAPLUS  
 CN Formaldehyde (8CI, 9CI) (CA INDEX NAME)

H<sub>2</sub>C=O

RN 107-15-3 HCAPLUS  
 CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)

H<sub>2</sub>N-CH<sub>2</sub>-CH<sub>2</sub>-NH<sub>2</sub>

RN 461-58-5 HCAPLUS  
 CN Guanidine, cyano- (8CI, 9CI) (CA INDEX NAME)



L64 ANSWER 14 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1978:564389 HCAPLUS

DN 89:164389

TI Amino silicate compounds and their resinous products

IN Blount, David H.

PA USA

SO U.S., 5 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4096118	A	19780620	US 1977-840557	19771011
PRAI	US 1977-840557	A	19771011		

AB Silica reacts chemical with an amino compound in the presence of an alkali catalyst at a temperature just above the m.p. of the amino compound but below its b.p. to give amino silicates which provide resinous products when treated with aldehydes, alcs., and epoxides. Thus, a mixture containing fine granular silica 2, urea 2, NaOH 1, and water 10 parts was heated at 80-100° until the water evaporated and then at a temperature above the m.p. of urea but below its b.p. One mol grey urea silicate product was mixed with 1 mol HCHO (as an aqueous solution) and heated for 20-120 min at 70-100° until the desired viscosity as reached. The light-grey liquid poly(formaldehyde urea silicate) resinous product was useful as an adhesive and protective coating for wood.

IC C08G077-04

INCL 260046500E

CC 36-3 (Plastics Manufacture and Processing)

ST polyaldehyde amino silicate; amino silicate resin; formaldehyde polymer amino silicate; silica reaction amino compd

IT 50-00-0DP, polymers with amino compound-silica reaction products  
57-13-6DP, reaction products with silica, polymers with formaldehyde  
62-53-3DP, reaction products with silica, polymers with formaldehyde  
62-56-6DP, reaction products with silica, polymers with formaldehyde  
98-00-0DP, polymers with amino compound-silica reaction products  
98-01-1DP, polymers with amino compound-silica reaction products  
106-89-8DP, polymers with amino compound-silica reaction products  
107-02-8DP, polymers with amino compound-silica reaction products  
107-15-3DP, reaction products with silica, polymers with aldehydes and epoxides  
108-78-1DP, reaction products with silica, polymers with formaldehyde  
461-58-5DP, reaction products with silica, polymers with formaldehyde  
592-31-4DP, reaction products with silica, polymers with formaldehyde  
4170-30-3DP, polymers with amino compound-silica reaction products  
7631-86-9DP, reaction product with amino compds., polymers with aldehydes and epoxides

RL: PREP (Preparation)

(preparation of)

IT 50-00-0DP, polymers with amino compound-silica reaction products  
107-15-3DP, reaction products with silica, polymers with aldehydes and epoxides  
461-58-5DP, reaction products with silica, polymers with formaldehyde

RL: PREP (Preparation)

(preparation of)

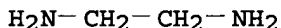
RN 50-00-0 HCAPLUS

CN Formaldehyde (8CI, 9CI) (CA INDEX NAME)



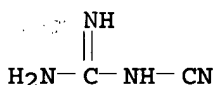
RN 107-15-3 HCAPLUS

CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)



RN 461-58-5 HCAPLUS

CN Guanidine, cyano- (8CI, 9CI) (CA INDEX NAME)



L64 ANSWER 15 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1975:548779 HCAPLUS

DN 83:148779

TI Recovering rubbery polymer

IN Ozawa, Nobuo; Torigoshi, Kiicho; Ikeda, Mitsuru; Ichikawa, Tatsuo

PA Japan Synthetic Rubber Co., Ltd., Japan

SO Jpn. Tokkyo Koho, 6 pp.

CODEN: JAXXAD

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 50008096	B4	19750402	JP 1970-111572	19701214
PRAI	JP 1970-111572	A	19701214		

AB Rubbers were recovered from solns. in hydrocarbon solvents by steam stripping in the presence of water-soluble anionic surfactant, e.g., diisobutylene-maleic anhydride polymer sodium salt (I) [37199-81-8], and water-soluble cationic surfactant, such as reaction products from (1) guanidine [113-00-8], dicyandiamide [461-58-5], or ethylenediamine [107-15-3] 1, (2) formaldehyde [50-00-0], paraformaldehyde [30525-89-4], or acetaldehyde [75-07-0] 1-4, and (3) ammonium sulfate [7783-20-2], hydrochloric acid [7647-01-0], or acetic acid [64-19-7] 0.2-2 moles at 60-100°. For example, 1,4-cis-polybutadiene solution in toluene was steam-stripped without foaming in the presence of 0.04 phr I Na salt and 0.05 phr cationic surfactant from guanidine 1, ammonium sulfate 1, and HCHO 2 moles to give nontacky rubber granules.

IC C08L; C08C

CC 38-4 (Elastomers, Including Natural Rubber)

ST butadiene rubber steam stripping; surfactant steam stripping rubber

IT Surfactants

(anionic and cationic, in steam stripping of butadiene rubber)

IT Rubber, butadiene, preparation

(steam stripping of, in presence of ionic surfactants)

IT 9003-17-2

(rubber, butadiene; steam stripping of, in presence of ionic surfactants)

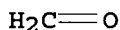
IT 50-00-0D, Formaldehyde, reaction products with guanidine and ammonium sulfate 64-19-7D, Acetic acid, reaction products with ethylenediamine and acetaldehyde 75-07-0D, Acetaldehyde, reaction products with ethylenediamine and acetic acid 107-15-3D, 1,2-Ethanediamine, reaction products with acetaldehyde and acetic acid 113-00-8D, Guanidine, reaction products with ammonium sulfate and formaldehyde 461-58-5D, Guanidine, cyano-, reaction products with hydrochloric acid and paraformaldehyde 7647-01-0D, Hydrochloric acid, reaction products with dicyandiamide and paraformaldehyde 7783-20-2D, Sulfuric acid diammonium salt, reaction products with guanidine and formaldehyde 30525-89-4D, Paraformaldehyde, reaction products with dicyandiamide and hydrochloric acid 37199-81-8  
RL: USES (Uses)

(surfactants, in steam stripping of butadiene rubber)

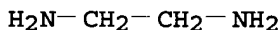
IT 50-00-0D, Formaldehyde, reaction products with guanidine and ammonium sulfate 107-15-3D, 1,2-Ethanediamine, reaction products with acetaldehyde and acetic acid 461-58-5D, Guanidine, cyano-, reaction products with hydrochloric acid and paraformaldehyde  
RL: USES (Uses)

(surfactants, in steam stripping of butadiene rubber)

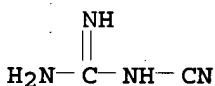
RN 50-00-0 HCAPLUS  
CN Formaldehyde (8CI, 9CI) (CA INDEX NAME)



RN 107-15-3 HCAPLUS  
CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)



RN 461-58-5 HCAPLUS  
CN Guanidine, cyano- (8CI, 9CI) (CA INDEX NAME)



L64 ANSWER 16 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 1968:420358 HCAPLUS  
DN 69:20358  
TI Fast acid dyeings of polyamides  
IN Kieseewetter, Alfred; Toepffer, Hans  
PA Cassella Farbwerke Mainkur A.-G.  
SO Ger., 2 pp.  
CODEN: GWXXAW  
DT Patent  
LA German  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 1266717		19680425	DE	19640718



- AB Acid dye colors on polyamides have only limited wet fastnesses (perspiration fastness and sea water fastness). After-treatments involving condensation products of naphthalenesulfonic acids, HCHO, and phenols improve the wet fastnesses. This improvement however is not heat-resistant. The fastness drop on heat-treated finished colored polyamides is avoided by treating the finished polyamide with a mixture of **dicyanamide**, HCHO, and ammonium or **amine** salts, with quaternized polyalkylenepolyamines or polyimines, or with polymeric quaternary salts, or aromatic ditertiary amines and aliphatic dihalogeno compds. (those mixts. being used normally to improve substantive color fastnesses on cotton). Thus, a polyamide fabric is colored with 2% C.I. Acid Red 155 (95°, Na<sub>2</sub>SO<sub>4</sub>, AcOH), rinsed, and treated with 6 g./l. of a condensation product of naphthalenesulfonic acids, HCHO, and phenols in the presence of HCO<sub>2</sub>H (15 min., 60°, pH 3, goods:liquor ratio 1:30). The substrate is dried and padded with a solution containing 4 g./l. condensation product of dicyandiamide, HCHO, and NH<sub>4</sub>Cl, then it is rinsed, dried, and heat fixed. The perspiration fastness test (DIN 54,020) gives good results while the untreated substrate does not.
- IC D06P
- CC 39 (**Textiles**)
- ST polyamides acid dyeing; acid dyeing polyamides; dyeing polyamides acid
- IT Nylon, uses and miscellaneous  
RL: USES (Uses)  
(dyeing of, with acid dyes with wet fastness improvement with **formaldehyde**-naphthalenesulfonic acid-phenol condensates)
- IT Dyeing  
(of nylon with acid dyes with perspiration and sea water fastness improvement)
- IT Phenols, compounds  
RL: USES (Uses)  
(reaction product with **formaldehyde** and naphthalenesulfonic acids, dye wet fastness improvement on nylon by)
- IT 64-18-6, uses and miscellaneous  
RL: USES (Uses)  
(dye wet fastness on nylon improvement by **formaldehyde**-naphthalenesulfonic acid-phenol reaction products in presence of)
- IT 25155-19-5P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(preparation of)
- IT 50-00-0, **Formaldehyde**  
RL: USES (Uses)  
(reaction products with naphthalenesulfonic acids and phenols, dye wet fastness improvement on nylon by)
- IT 50-00-0, **Formaldehyde**  
RL: USES (Uses)  
(reaction products with naphthalenesulfonic acids and phenols, dye wet fastness improvement on nylon by)
- RN 50-00-0 HCAPLUS
- CN Formaldehyde (8CI, 9CI) (CA INDEX NAME)

H<sub>2</sub>C=O

L64 ANSWER 17 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 1959:37179 HCAPLUS  
DN 53:37179  
OREF 53:6637f-g  
TI Dyeing of polyacrylonitrile

IN Flath, Arno; Lippold, Kurt; Puhlmann, Gunther  
PA VEB Farbenfabrik Wolfen  
DT Patent  
LA Unavailable  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DD 10923		19551206	DD	
AB	Polyacrylonitrile yarn is pretreated for 1 hr. at 95° with 20 times its weight of a 0.3% aqueous alkaline (0.1% Na <sub>2</sub> CO <sub>3</sub> ) solution of the condensation product of aromatic amines (e.g. PhNH <sub>2</sub> , o-nitroaniline, 3,5-dinitroaniline) with dicyanodiamide and HCHO and then washed well. The yarn can be dyed with various substantive, acid, and S dyes. Mixts. of the polyacrylonitrile yarn with various natural fibers can also be colored effectively by this process.				
INCL	8M; 8-01				
CC	25 (Dyes and Textiles Chemistry)				
IT	Fibers, synthetic (from acrylonitrile polymers, dyeing of, treated with amine-dicyanodiamide-HCHO condensation products)				
IT	Dyeing (of acrylonitrile-polymer fibers, treated with amine-dicyanodiamide-HCHO condensation products with acid, substantive and sulfur dyes)				
IT	Amines (reaction products, with dicyanodiamide and HCHO, acrylonitrile-polymer-fiber dyeing pretreatment with)				
IT	25014-41-9, Acrylonitrile polymers (fibers from, dyeing with acid, substantive and S dyes on, treated with amine-dicyanodiamide-HCHO condensation products)				
IT	50-00-0, Formaldehyde (reaction products of, with amines and dicyandiamide, acrylonitrile-polymer-fiber dyeing pretreatment with)				
IT	461-58-5, Guanidine, cyano- (reaction products with amines and HCHO, acrylonitrile-polymer-fiber dyeing pretreatment with)				
IT	50-00-0, Formaldehyde (reaction products of, with amines and dicyandiamide, acrylonitrile-polymer-fiber dyeing pretreatment with)				
RN	50-00-0 HCAPLUS				
CN	Formaldehyde (8CI, 9CI) (CA INDEX NAME)				

H<sub>2</sub>C=O

L64 ANSWER 18 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 1959:37160 HCAPLUS  
DN 53:37160  
OREF 53:6632a-c  
TI Fixers for substantive dyes  
IN Brodersen, Karl  
DT Patent  
LA Unavailable  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DD 11061		19560102	DD	

AB **Fixers** for substantive **dyes** are prepared by condensing 1 part **amine** or **imine**, e.g., **dicyanodiamide** (I) or **biguanidine** (II), with 4 parts **HCHO** (III) at pH 4-5, in the presence or absence of **NH<sub>3</sub>** salts. III is added wholly or partially as **hexamethylenetetramine** (IV). When maximal **dye-fixing** ability of the solution is attained, as judged by titrating highly diluted samples with a standard substantive dye solution, the reaction is quenched either by cooling the mixture or by interrupting the addition of acid required to maintain the pH between the given limits or by spray-drying the product immediately. Thus, 168 g. I is stirred 1-2 hrs. at 90° with 132 g. (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> in 400 ml. water. On cooling to 20°, a crystalline mass of II ppts. Then 1100 g. of 30% III and 160 g. of 29% NH<sub>3</sub> solution are added to immediately form IV. The solution is acidified to pH 4.5-5.0 with 60° B.acte.e. H<sub>2</sub>SO<sub>4</sub> and warmed at 80°. More acid is added to maintain the pH given. A dye stock solution is prepared by dissolving 1 g. Columbia Fast Red F and 1 g. Chicago Blue 6B with 5 g. calcined soda in 2 l. distilled water. Then 5 ml. of this stock solution is diluted with 20 ml. distilled water to give the standard solution for titrating with fixer. The fixing solution is prepared for titration by diluting 3 ml. reaction mixture to 1 l. with distilled water. The fixer solution is added to the dye solution until a spot test shows all the dye has been precipitated. Here the maximal fixing activity is reached after approx. 2 hrs. Approx. 2.5 ml. diluted fixer solution is required to precipitate all the dye in the titration test.

INCL 8M; 1-01

CC 25 (Dyes and Textiles Chemistry)

IT **Dyeing**

(fixing agents for, by amine or imine condensation with HCHO in presence or absence of NH<sub>4</sub> salts)

IT **Imines**

(reaction products with HCHO for **dye fixation**)

IT **Amines**

(reaction product, with HCHO for **dye fixation**)

IT 461-58-5, Guanidine, cyano- 6882-47-9, Biguanidine

(reaction with HCHO in presence or absence of NH<sub>4</sub> salts, **dye fixatives** by)

IT 50-00-0, **Formaldehyde**

(reactions of, with amines or imines in presence or absence of NH<sub>4</sub> salts, **dye fixatives** by)

IT 100-97-0, Hexamethylenetetramine

(reactions of, with amines or imines, **dye fixatives** by)

IT 50-00-0, **Formaldehyde**

(reactions of, with amines or imines in presence or absence of NH<sub>4</sub> salts, **dye fixatives** by)

RN 50-00-0 HCAPLUS

CN Formaldehyde (8CI, 9CI) (CA INDEX NAME)

H<sub>2</sub>C=O

L64 ANSWER 19 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1950:34775 HCAPLUS

DN 44:34775

OREF 44:6651f-h

TI Copper salts of hydroxylated **amines** condensed with **dicyanodiamide** and **formaldehyde**

PA Sandoz Ltd.

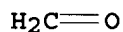
DT Patent

LA Unavailable

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CH 262776		19491017	CH	
AB	Treatment of hydroxylated aliphatic amine-H <sub>2</sub> NC(:NH)NHCN-HCHO condensation product 100 with H <sub>2</sub> O 500 containing CuCl <sub>2</sub> .2H <sub>2</sub> O 13.2 g. gave a yellow-green, H <sub>2</sub> O-soluble product which is useful as an intermediate in the preparation of textile dyes possessing unusual fastness to light. In Swiss 263,481, Nov. 17, 1949, ClCH <sub>2</sub> CH(OH)CH <sub>2</sub> OH 24.6 g. was added to 25% NH <sub>4</sub> OH 70 cc. at 50-70°, refluxed several hrs., and neutralized with HCl; 40 g. of the product heated with H <sub>2</sub> NC(:NH)NHCN 6.8 g. and 40% HCHO 24 cc. followed by evaporation to dryness gave a white, H <sub>2</sub> O-soluble powder which, as such, or mixed with Cu salts, is useful in the fixation of substantive dyes on textile fibers. In Swiss 263,482 (addition to Swiss 258,276, C.A. 44, 1715i), diethylenetriamine 412 g. and H <sub>2</sub> O 500 cc. was mixed with ClCH <sub>2</sub> CH(OH)CH <sub>2</sub> Cl 258 and heated at 60° for several hrs.; 120 g. of the resulting solution neutralized, heated for 1 hr. at 70-95° with H <sub>2</sub> NC(:NH)NHCN 18 g. and 40% HCHO 80 cc., and evaporated to dryness gave a white, H <sub>2</sub> O-soluble powder which is useful as in the preceding pat.				
INCL	24A				
CC	25 (Dyes and Textiles Chemistry)				
IT	Intermediates (amino alc.-dicyanodiamide-HCHO condensate Cu salt)				
IT	Alcohols (amino, condensation products with dicyanodiamide and HCHO, Cu salts of)				
IT	Dyeing (fixatives for)				
IT	7440-50-8, Copper (compds., with amino alc.-dicyanodiamide-HCHO condensates)				
IT	50-00-0, Formaldehyde (reaction products of, with amino alcs. and dicyandiamide, Cu salts of)				
IT	50-00-0, Formaldehyde (reaction products of, with cyanoguanidine and NH <sub>4</sub> OH-3-chloro-1,2-propanediol reaction product, dye fixative by)				
IT	50-00-0, Formaldehyde (reaction products of, with cyanoguanidine and diethylenetriamine-glyceroldichlorohydrin reaction product, dye fixative)				
IT	461-58-5, Guanidine, cyano- (reaction products with amino alcs. and HCHO, Cu salts of)				
IT	1336-21-6, Ammonium hydroxide (reaction with 3-chloro-1,2-propanediol and condensation of product with cyanoguanidine and HCHO, dye fixative by)				
IT	461-58-5, Guanidine, cyano- (reaction with HCHO and NH <sub>4</sub> OH reaction product with 3-chloro-1,2-propanediol dye fixative by)				
IT	461-58-5, Guanidine, cyano- (reaction with HCHO and diethylenetriamine-glyceroldichlorohydrin reaction product, dye fixative by)				
IT	96-24-2, 1,2-Propanediol, 3-chloro- (reaction with NH <sub>4</sub> OH and condensation of product with cyanoguanidine and HCHO, dye fixative by)				
IT	96-23-1, 2-Propanol, 1,3-dichloro- (reaction with diethylenetriamine and condensation of product with cyanoguanidine and HCHO, dye fixative by)				
IT	111-40-0, Diethylenetriamine (reaction with glyceroldichlorohydrin and condensation of product with cyanoguanidine and HCHO, dye fixative by)				

IT 7440-50-8, Copper  
 (salts, in **dye-fixation** mixts.)  
 IT 50-00-0, **Formaldehyde**  
 (reaction products of, with amino alcs. and dicyandiamide, Cu salts of)  
 RN 50-00-0 HCAPLUS  
 CN Formaldehyde (8CI, 9CI) (CA INDEX NAME)



(reaction products of, with cyanoguanidine and  $\text{NH}_4\text{OH}$ -3-chloro-1,2-propanediol reaction product, **dye fixative** by  
 (reaction products of, with cyanoguanidine and diethylenetriamine-glyceroldichlorohydrin reaction product, **dye fixative**)

L64 ANSWER 20 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1950:8900 HCAPLUS

DN 44:8900

OREF 44:1715h-i,1716a

TI Hydroxylated **amines** condensed with **dicyanodiamide** and **formaldehyde**

PA Sandoz Ltd.

DT Patent

LA Unavailable

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CH 258276		19490502	CH	

PI AB Aliphatic amines, containing at least one OH-group (I) are treated with  $\text{H}_2\text{NC}(:\text{NH})\text{NHCN}$  and  $\text{HCHO}$  and optionally aftertreated with metal compds. Examples for I are hoxyamines, such as  $\text{NH}_2\text{C}_2\text{H}_4\text{OH}$  or polyamines, prepared by condensing halohydrins with  $\text{NH}_3$  or aliphatic amines, e.g. polyhoxypypropylene polyamine-HCl obtained from  $\alpha$ - $\gamma$ -glyceroldi-Chlorohydrin with  $\text{NH}_3$ . By condensing I with  $\text{H}_2\text{NC}(:\text{NH})\text{NHCN}$  and  $\text{HCHO}$  a white,  $\text{H}_2\text{O}$ -soluble powder, useful as such or mixed with multivalent metal salts, preferably Cu-salts, for improving the fastnesses to  $\text{H}_2\text{O}$ , perspiration, and washing of direct dyeings on cellulosic fibers results.

INCL 24A

CC 25 (Dyes and **Textiles** Chemistry)

IT Alcohols

(amino, condensation products with dicyanodiamide and  $\text{HCHO}$  for dye-fastness improvement)

IT Perspiration

(dye fastness to, condensation products for improving)

IT Dyeing

(fastness improvement in, to perspiration, washing and water, amino alc.-dicyandiamide- $\text{HCHO}$  condensation products for)

IT 50-00-0, **Formaldehyde**

(reaction products of, with amino alcs. and dicyandiamide for dye-fastness improvement)

IT 461-58-5, Guanidine, cyano-

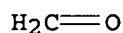
(reaction products with amino alcs. and  $\text{HCHO}$ , for dyefastness improvement)

IT 50-00-0, **Formaldehyde**

(reaction products of, with amino alcs. and dicyandiamide for dye-fastness improvement)

RN 50-00-0 HCAPLUS

CN Formaldehyde (8CI, 9CI) (CA INDEX NAME)



=&gt; =&gt; D QUE

L21 1 SEA FILE=REGISTRY ABB=ON DICYNODIAMIDE/CN  
 L23 1 SEA FILE=REGISTRY ABB=ON ETHYLENEDIAMINE/CN  
 L26 STR

RRT

RRT

H2N—Ak—NH2

N~~C~~NH^CN

1 2 3

7 4 5 6

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE

L28 22 SEA FILE=CASREACT SSS FUL L26 ( 79 REACTIONS)  
 L30 0 SEA FILE=CASREACT ABB=ON L28 AND 50-00-0/NPRO  
 L31 0 SEA FILE=CASREACT ABB=ON L28 AND 50-00-0/RRT  
 L32 22 SEA FILE=CASREACT ABB=ON L28 OR L30 OR L31  
 L33 1 SEA FILE=REGISTRY ABB=ON 50-00-0  
 L34 828 SEA FILE=HCAPLUS ABB=ON L21/D  
 L35 5975 SEA FILE=HCAPLUS ABB=ON L23/D  
 L36 6561 SEA FILE=HCAPLUS ABB=ON L33/D  
 L39 8 SEA FILE=HCAPLUS ABB=ON L34 AND L35 AND L36  
 L40 22 SEA FILE=HCAPLUS ABB=ON L32  
 L41 8 SEA FILE=HCAPLUS ABB=ON (L39 OR L40) NOT L40  
 L42 6841 SEA FILE=HCAPLUS ABB=ON L21  
 L43 26544 SEA FILE=HCAPLUS ABB=ON L23  
 L44 68859 SEA FILE=HCAPLUS ABB=ON L33  
 L45 21 SEA FILE=HCAPLUS ABB=ON L42 AND L43 AND L44  
 L46 0 SEA FILE=HCAPLUS ABB=ON L45 AND DETERGENT?/SC,SX  
 L47 140 SEA FILE=HCAPLUS ABB=ON (L34 OR DICYNODIAMID? OR DICYN!DIAMI  
 D? OR DICYNAMID?) (6A) (L43 OR DIAMIN? OR AMINE#)  
 L48 2 SEA FILE=HCAPLUS ABB=ON L47 AND DETERGENT?/SC,SX  
 L50 20 SEA FILE=HCAPLUS ABB=ON L47 AND (FORMALDEHYDE OR L44)  
 L51 7 SEA FILE=HCAPLUS ABB=ON L50 AND (DETERGENT?/SC,SX OR TEXTILE?/  
 SC,SX)  
 L52 3 SEA FILE=HCAPLUS ABB=ON L50 AND DYE? (2A) FIX?  
 L53 21 SEA FILE=HCAPLUS ABB=ON L45 NOT L40  
 L54 0 SEA FILE=HCAPLUS ABB=ON L53 AND DYE? (2A) FIX?  
 L55 2 SEA FILE=HCAPLUS ABB=ON L53 AND TEXTIL?/SC,SX  
 L56 17 SEA FILE=HCAPLUS ABB=ON L41 OR L46 OR L48 OR L51 OR L52 OR  
 L54 OR L55  
 L57 0 SEA FILE=HCAPLUS ABB=ON (L45 OR L47) AND COLOR? (2A) FIX?  
 L58 0 SEA FILE=HCAPLUS ABB=ON (L45 OR L47) AND COLOR? (2A) TRANSFER?  
 L59 17 SEA FILE=HCAPLUS ABB=ON L56 OR L57 OR L58  
 L61 14 SEA FILE=HCAPLUS ABB=ON ( L34 OR CYANAMID?) (4A) (?AMINE? OR  
 DIAMIN? OR L43) (4A) (FORMALDEHYDE OR L44)  
 L62 2 SEA FILE=HCAPLUS ABB=ON L61 AND (DETERGENT?/SC,SX OR (DYE? OR  
 COLOR?) (2A) FIX? OR COLOR? (2A) TRANSFER?)

L63 3 SEA FILE=HCAPLUS ABB=ON L61 AND TEXTIL?/SC,SX  
 L64 20 SEA FILE=HCAPLUS ABB=ON L59 OR L63  
 L68 21 SEA FILE=HCAPLUS ABB=ON L59 OR L62 OR L63  
 L69 1 SEA FILE=HCAPLUS ABB=ON L68 NOT L64

=> D L69 BIB ABS IND HITSTR

L69 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:693198 HCAPLUS

DN 137:218765

TI Laundry detergents and fabric care agents with **color-transfer** inhibiting **color-fixing** agents and at least one nonionic surfactant

IN Lang, Frank-peter; Berenbold, Helmut; Wessling, Michael

PA Clariant Gmbh, Germany

SO Eur. Pat. Appl., 13 pp.

CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1239025	A2	20020911	EP 2002-4065	20020223
	EP 1239025	A3	20030903		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	DE 10150723	A1	20030417	DE 2001-10150723	20011013
	US 2002193280	A1	20021219	<del>US 2002-85997</del>	20020228
	US 2003171249	A1	20030911	US 2002-85712	20020228
	US 6858570	B2	20050222		
	JP 2002363595	A2	20021218	JP 2002-56353	20020301
PRAI	DE 2001-10110337	A	20010303		
	DE 2001-10150723	A	20011013		

AB A detergent containing a **color-transfer** inhibiting **color-fixing** agent, which may be obtained from reaction (a) of amines with epichlorohydrin or (b) of **cyanamide** with **amines** and **formaldehyde** contains addnl. nonionic surfactants, anionic surfactants, detergent builders, cationic surfactants, dye transfer inhibiting agents, soil release polymers, cellulase or bleaching agents. The effect of the **color-fixing** agents was investigated using five com. laundry detergents and white and colored textiles. The  $\Delta E$  values observed showed a remarkable difference compared with laundry detergents without using the inventive **color-fixing** components.

IC ICM C11D003-37

CC 46-5 (Surface Active Agents and Detergents)

ST laundry detergent **color transfer** inhibiting **color fixing** agent; epichlorohydrin amine product **color transfer** inhibiting **color fixing** agent; **cyanamide amines formaldehyde** product **color transfer** inhibiting detergent; detergent laundry **color transfer** resistant additive

IT Surfactants

(anionic; laundry detergents containing **color-transfer** inhibiting **color-fixing** agents)

IT Surfactants

(cationic; laundry detergents containing **color-transfer** inhibiting **color-fixing** agents)

IT Bleaching agents

Detergent builders  
(laundry detergents containing **color-transfer**  
inhibiting **color-fixing** agents)

IT Detergents  
(laundry, **color-transfer** inhibiting, **color**  
**-transfer** resistant; laundry detergents containing **color**  
**-transfer** inhibiting **color-fixing** agents)

IT Surfactants  
(nonionic; laundry detergents containing **color-transfer**  
inhibiting **color-fixing** agents)

IT Amines, uses  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(reaction products with epichlorohydrin or cyanamides and formaldehyde;  
laundry detergents containing **color-transfer** inhibiting  
**color-fixing** agents)

IT Polymers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(soil release; laundry detergents containing **color-**  
**transfer** inhibiting **color-fixing** agents)

IT 50-00-0DP, **Formaldehyde**, reaction products with  
**cyanamide** and **amines** 106-89-8DP, Epichlorohydrin,  
reaction products with **amines** 420-04-2DP, **Cyanamide**, reaction  
products with **amines** and **formaldehyde**  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(**color-transfer** inhibiting **color-**  
**fixing** agents; laundry detergents containing **color-**  
**transfer** inhibiting **color-fixing** agents)

IT 9012-54-8, Cellulase  
RL: TEM (Technical or engineered material use); USES (Uses)  
(laundry detergents containing **color-transfer**  
inhibiting **color-fixing** agents)

IT 50-00-0DP, **Formaldehyde**, reaction products with  
**cyanamide** and **amines**  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(**color-transfer** inhibiting **color-**  
**fixing** agents; laundry detergents containing **color-**  
**transfer** inhibiting **color-fixing** agents)

RN 50-00-0 HCAPLUS  
CN Formaldehyde (8CI, 9CI) (CA INDEX NAME)

H<sub>2</sub>C=O

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